

## CHAPTER 3 ADJUSTMENTS TO HOURLY RATES

### SECTION I. GENERAL

#### 3.1 Contents

This chapter explains the procedures for adjusting the hourly rates shown in tables 2-1 and 2-2.

#### 3.2 Basis for Equipment Rates

The rates shown in tables 2-1 and 2-2 are based on the catalog list price of equipment manufactured in 2002 (3 years old). Area factors used to compute regional ownership and operating expenses are listed in appendix B. All equipment hourly rate elements for average and severe conditions are given in table 2-2. Individual cost elements, which comprise the total hourly rate, are shown in table 2-2. These hourly rate elements are listed by equipment ID No., which corresponds to the equipment shown in tables 2-1 and 2-2.

a. Ownership costs consist of two cost elements: depreciation (DEPR) and facilities capital cost of money (FCCM). These elements are located in table 2-1 and table 2-2.

b. Operating costs consist of five cost elements: fuel (FUEL); filters, oil, and grease (FOG); repairs (REPAIR); tire wear (TIRE WEAR); and tire repair (TIRE REPAIR). These elements are located in table 2-2.

#### 3.3 Equipment Rate Adjustment Tables

Table 3-1 is used to adjust the ownership (DEPR + FCCM) portion of the average hourly rate and table 3-2 is used to adjust the standby hourly rate shown in table 2-1.

#### 3.4 Determination for Use of Equipment Rates in Tables 2-1 and 2-2

The predetermined rates in tables 2-1 and 2-2 may be used when the contractor's data is insufficient to calculate the equipment rates using actual cost data (cost or pricing data) or the actual data for the unit of equipment (see figure 2-1). When it is determined that tables 2-1 and 2-2 are to be used and the contractor's actual unit of equipment is not listed in table 2-1, an equivalent unit of equipment may be used. This unit of equipment must be equivalent in size, capacity, horsepower, and value to the contractor's actual unit of equipment.

## SECTION II. RATE ADJUSTMENTS

### 3.5 Rate Adjustments

The ownership and/or the operating portion of the hourly rates and standby hourly rates shall be adjusted whenever one or more of the following rate adjustment conditions exist (rate adjustments are explained in detail in the following paragraphs).

- Changes in operating conditions
- Changes in Cost of Money Rate
- Actual work hours (hrs) exceed 40 hr per week (wk)
- Changes in FUEL cost
- Adjustments to FOG cost
- Equipment of different age than table 2-1
- Rate adjustment for overage equipment
- Rate adjustment for overage equipment standby

There are no rate adjustments for appendix B factors except for fuel cost (electric, gas, diesel off-road, and diesel on-road) and the Cost of Money Rate. Also, there are no rate adjustments for repairs, tire wear, or tire repair.

### 3.6 Changes in Operating Conditions

If difficult or severe conditions are justified by the Contracting Officer, selection or calculation of the appropriate rate is necessary. See chapter 2, section II, for definition of average, difficult, or severe conditions and determination of condition.

### 3.7 Change in Cost of Money Rate (CMR)

The Department of the Treasury adjusts the CMR (Prompt Payment Interest Rate) on or about 1 January and 1 July each year; these revisions are printed in the Federal Register. The Internet address for Prompt Payment Interest Rate is <http://www.publicdebt.treas.gov/opd/opdprmt2.htm>.

If the CMR shown in chapter 2, section VII, is not the current rate, the FCCM portion of the total hourly rate shall be adjusted upward or downward to match the CMR for the period of equipment use. See appendix I for a listing of historical CMRs. The total hourly rate adjusted for a differing CMR is computed by the formula:

$$\text{Total Hourly Rate} = \text{DEPR/hr} + [(\text{FCCM/hr}) \times \frac{(\text{NEW CMR})}{(\text{Old CMR})}] + \text{Operating Costs/hr}$$

Example: Assume that table 2-1 includes a crane [category (CAT) C80, subcategory (SUB) 0.02] with hourly costs as shown in the following example. The CMR has increased from 5.00 percent to a current rate of 6.00 percent (increase of 20 percent). The total hourly rate for this piece of equipment is determined as follows:

Assumptions for Total Hourly Rate with CMR of 5.00%:

DEPR	= \$30.00/hr
FCCM	= \$10.00/hr
Operating Costs (FUEL, FOG, TIRE WEAR, TIRE REPAIR, and REPAIR)	<u>= \$40.00/hr</u>
Total Hourly Rate (Based on a 40 hr/wk)	= \$80.00/hr

Adjustment Calculation of Total Hourly Rate for New CMR of 6.00%:

$$\$30.00/\text{hr} + [(\$10.00/\text{hr}) \times (6.00\%)] + \$40.00/\text{hr} = \$82.00/\text{hr}$$

(5.00%)

### 3.8 Actual Work Hours Greater than 40 Hours per Week

If the actual number of work hours per week is greater than 40 hours, an adjustment shall be made to the FCCM element of the ownership cost. The FCCM is to be paid up to a maximum of 40 hours per week (7 calendar days). To calculate a multi-shift rate, prorate the 40-hour FCCM over the actual hours per week, as follows:

$$\text{Total Hourly Rate} = \text{DEPR}/\text{hr} + [(\text{FCCM}/\text{hr}) \times (40 \text{ hr/wk})] + \text{Operating Costs}/\text{hr}$$

(Actual Work hr/wk)

Example: Assume that table 2-1 includes a crane (category C80, subcategory 0.02) with the below hourly costs. This crane worked 10 hours per day, 6 days per week (60 hours per week). The total hourly rate for this piece of equipment is determined as follows:

Assumptions for Total Hourly Rate for 40 Hours/Week:

DEPR	= \$30.00/hr
FCCM	= \$10.00/hr
Operating Costs (FUEL, FOG, TIRE WEAR, TIRE REPAIR, and REPAIR)	<u>= \$40.00/hr</u>
Total Hourly Rate (40 hr/wk)	= \$80.00/hr

Adjustment Calculation of Total Hourly Rate for 60 Hours/Week:

$$\$30.00/\text{hr} + [(\$10.00/\text{hr}) \times (40 \text{ hr/wk})] + \$40.00/\text{hr} = \$76.67/\text{hr}$$

(60 hr/wk)

### 3.9 Changes in Fuel Cost

Hourly fuel costs (including electricity) shall be adjusted in the event the average fuel prices at the jobsite vary by more than 10 percent above or below the price in appendix B. The contractor shall be required to furnish copies of all fuel supply contracts and invoices to the government to support fuel cost adjustment. Request for upward adjustment in the rates will be considered only when fuel is supplied by recognized distributors of bulk quantities. Mathematically, this is the ratio of the new fuel cost divided by the fuel cost (appendix B). To calculate the total hourly rate, apply the ratio of fuel cost, as follows:

$$\text{Total Hourly Rate} = (\text{DEPR/hr} + \text{FCCM/hr}) + (\text{FOG/hr} + \text{TIRE WEAR/hr} + \text{TIRE REPAIR/hr} + \text{REPAIR/hr}) + \left[ \frac{(\text{New Fuel Cost})}{(\text{Fuel Cost in Appendix B})} \times \text{FUEL/hr} \right]$$

Example: Assume that table 2-1 includes a crane (*category C80, subcategory 0.02*) with the below hourly costs. Assume the fuel cost (diesel off-road) in appendix B is \$1.50/gal and the current fuel cost has increased to \$1.80/gal (increase of 20.00 percent). The total hourly rate for this piece of equipment can be determined as follows:

Assumptions for Fuel Cost (based on \$1.50/gal from appendix B):

DEPR	= \$30.00/hr
FCCM	= \$10.00/hr
FOG + TIRE WEAR + TIRE REPAIR + REPAIR	= \$30.00/hr
FUEL	= \$10.00/hr
Total Hourly Rate	= \$80.00/hr

Adjustment Calculation for hourly FUEL cost using the new fuel cost of \$1.80/gal:

$$(\$30.00/\text{hr} + \$10.00/\text{hr}) + \$30.00/\text{hr} + \left[ \frac{(\$1.80/\text{gal})}{(\$1.50/\text{gal})} \times \$10.00/\text{hr} \right] = \$82.00/\text{hr}$$

### 3.10 Adjustments to Fuel, Oil, and Grease (FOG) Cost

The hourly FOG allowance shall also be adjusted upward or downward by applying the same ratio (new fuel cost divided by fuel cost shown in appendix B) as the fuel costs change using the methodology as shown in paragraph 3-9.

### 3.11 Equipment of Different Age than Table 2-1

When the age of the equipment is newer or older than the age of the equipment listed in table 2-1, table 3-1 factors may be used to adjust the hourly rate (see paragraph 3-4 for guidance), otherwise the step-by-step calculation method (as shown

in figure 2-1) is necessary. To adjust the hourly rate using the tables, the factors given in table 2-1 are multiplied by the hourly ownership costs shown in table 3-1. The result is an ownership rate adjusted for the actual age of the equipment. Note: Age adjustment factors in tables 3-1 and 3-2 vary by region.

a. When the age of a unit of equipment is older than the age of the equipment listed in table 2-1 (purchased new in 2002) and does not exceed the years of economic life, adjust the hourly rate as shown in the next example. The years of economic life is determined by dividing hours of LIFE (from appendix D) by Working Hours Per Year (WHPY) (from appendix B).

Example: Assume that table 2-1 includes a crane (*category C80, subcategory 0.02*) manufactured in 2002 and has a total hourly rate of \$65 per hour and an ownership rate of \$30 per hour. If an equivalent crane owned by a contractor was manufactured in 1996, the total hourly rate is determined as follows:

Table 2-1 Rate and Adjustment Calculation:

Total hourly rate	= \$65.00/hr
Ownership rate 2002 (DEPR + FCCM)	=-\$(\$30.00)/hr
Ownership rate 1996 adjusted for age (Ownership rate = \$30) x (0.89 the age adjustment factor from table 3-1, for category C80, subcategory 0.02, and for the year 1996.)	=+\$26.70/hr
Total hourly rate for equipment manufactured in 1996	= \$61.70/hr

b. When the unit of equipment is older than the age of equipment listed in table 2-1 (purchased new in 2002) and exceeds the years of economic life, adjust the hourly rate as shown in the example for overage equipment in paragraph 3-12.a.

c. When the unit of equipment is newer than the equipment listed in table 2-1 (purchased new in 2002), use the adjustment factor in table 3-1 for the year of manufacture. If the equipment is newer than the most recent year shown in table 3-1, use the adjustment factor in the column of the most recent year. Once the adjustment factor is determined from table 3-1, complete the adjustment calculation as shown in the example above. The step-by-step calculation method shown in figure 2-1 may also be used.

### **3.12 Rate Adjustment for Overage Equipment**

If the contractor's equipment exceeds the economic life in hours (from appendix D), it is considered overage, and the rates shall be adjusted.

a. The total hourly operating rate for overage equipment (no matter how old) shall be computed on the basis that the equipment is as old as possible "without" exceeding the hours of LIFE as shown in appendix D. Tables 3-1 and 3-2 show factors for the economic life for equipment based on the current pamphlet year (e.g. manufactured in 2002). Select a comparable unit of equipment (horsepower, value, capacity, and size) shown in table 2-1, the total hourly rate can be computed as shown in the following example. If there is no comparable unit of equipment in table 2-1, follow the methodology presented in figure 3-1.

b. The ownership portion of the rate shall be adjusted for equipment that is overage. This adjusted rate is not to exceed the rate for the same unit of equipment that is not overage.

Example: Assume that table 2-1 includes a crane (*category C80, subcategory 0.02*) manufactured in 2002, has a total hourly rate of \$65 per hour, and an ownership rate of \$30 per hour. If an equivalent crane owned by a contractor was manufactured in 1986 (maximum life 1993), this crane is overage and the total hourly rate is determined as follows:

Table 2-1 Rate and Adjustment Calculation:

Total hourly rate	=	\$65.00/hr
Ownership rate 2002 (DEPR + FCCM)	=	-(\$30.00)/hr
Ownership rate 1986 adjusted for age (Ownership rate = \$30.00) x (0.83 use the oldest age adjustment factor from table 3-1, for category C80, subcategory 0.02, the last year shown.)	=	<u>+\$24.90/hr</u>
Total hourly rate for equipment manufactured in 1986	=	\$59.90/hr

### **3.13 Standby Rate Adjustment for Equipment of a Different Age than Table 2-1**

If the equipment age is other than listed in table 2-1 (purchased new in 2002), adjustment to the hourly standby rate is required. When the age of the equipment is newer or older than the age of the equipment listed in table 2-1, table 3-2 factors may be used to adjust the hourly rate, otherwise the step-by-step calculation method is necessary. The result is a standby rate adjusted for the actual age of the equipment.

a. Standby rates for overage equipment are based on the actual age of the equipment. The age adjustment factor given in table 3-2 is multiplied by the hourly standby cost shown in table 2-1 for the listed or comparable unit of equipment. This results in a standby rate adjusted for the actual age of the unit of equipment being considered.

Hourly Standby Rate Adjusted for Actual Age =  
Hourly Standby Rate x Age Adjustment Factor

Example: Assume that table 2-1 includes a crane (category C80, subcategory 0.02) manufactured in 2002 and has a standby rate of \$20.00 per hour. If an equivalent crane owned by a contractor was manufactured in 1994, the hourly standby rate is determined as follows:

Hourly Standby Rate (table 2-1)	= \$20.00/hr
Age Adjustment Factor (table 3-2)	= 0.85
for category C80, subcategory 0.02, and for 1994 (actual year of manufacture)	

Adjustment Calculation:

Hourly Standby Rate Adjusted for Actual Age	= \$20.00/hr
(Hourly Standby Rate) x 0.85 (Age Adjustment Factor)	= \$17.00/hr

b. When the unit of equipment is newer than the equipment listed in table 2-1 (purchased new in 2002), use the adjustment factor in table 3-2 for the year of manufacture. Once the adjustment factor is determined from table 3-2, complete the adjustment calculation as shown in the example above. The step-by-step calculation method shown in figure 3-2 may also be used.

c. When the equipment age is older than the last year shown in table 3-2 or newer than the first year shown in table 3-2, the standby rate must be calculated using the step-by-step methodology shown in figure 3-2.

### **3.14 Equipment Purchased Used**

A detailed methodology for computing a total hourly rate for equipment purchased used is not included in this pamphlet.

a. When actual cost data in accordance with chapter 1 is not available, an hourly rate and standby rate for equipment purchased used can be computed on the basis that the equipment was purchased new by the contractor in the year it was manufactured. Consideration for the actual age of used equipment may require an adjustment for overage.

b. The condition of the used equipment at the time of purchase should consider the extent of capital improvements, mechanical condition, and previous hours of operation. These conditions are difficult or impossible to determine and evaluate when computing a total hourly rate based on actual acquisition cost.

### **3.15 Rate Calculation Examples**

Figure 3-1 illustrates how total hourly rates are adjusted for overage equipment. Figure 3-2 gives a sample calculation for computing adjusted standby rates.

**Table 3-1. Equipment Age Adjustment Factors**

for

Ownership Costs

The factors in this table are used when the age of a unit of equipment is other than the age of the equipment listed in table 2-1 (purchased new in 2002).

The factors are multiplied by the hourly ownership costs (shown in table 2-1) and result in an ownership rate adjusted for the actual age of the equipment being considered.

When the actual "life" in hours of the unit of equipment has exceeded the economic life given in appendix D, the age will be determined as discussed in chapter 3.

Refer to chapter 3, as follows:

**3-11. Equipment of Different Age than Table 2-1**

**3-12. Rate Adjustment for Overage Equipment**

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 SUB	TYPE OF EQUIPMENT	Life in Years		Year Purchased New													
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
A10 0.00	AGGREGATE / CHIP SPREADERS																	
A10 0.10	SELF-PROPELLED		1.03	1.00	1.00	1.00	1.00	0.98	0.96									
A10 0.20	TOWED & TAILGATE		1.03	1.00	1.00	1.00	1.00											
A15 0.00	AIR COMPRESSORS, PORTABLE																	
A15 0.10	ROTARY SCREW		1.04	1.01	1.00	1.00	1.00	0.99	1.00	1.00								
A15 0.20	SHOP TYPE		1.04	1.01	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00						
A20 0.00	AIR HOSE, TOOLS & EQUIPMENT																	
A20 0.10	AIR DRILL HOSE		1.04	1.01	1.00	1.00												
A20 0.20	SANDBLAST HOSE		1.04	1.01	1.00	1.00												
A20 0.30	SANDBLASTERS, BREAKERS, & MISC. AIR TOOLS		1.04	1.01	1.00	1.00	1.00											
A25 0.00	ASPHALT PAVING DISTRIBUTORS		1.03	1.00	1.00	1.00	1.00											
A30 0.00	ASPHALT PAVERS & MISCELLANEOUS ROAD EQUIPMENT																	
A30 0.10	SELF PROPELLED		1.03	1.00	1.00	1.00	1.00	0.98	0.96									
A30 0.20	TOWED		1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94								
A30 0.30	SLURRY SEAL PAVERS (Cold mix)		1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88						
A30 0.40	MISCELLANEOUS ROAD EQUIPMENT		1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94								
A35 0.00	ASPHALT PAVING KETTLES		1.03	1.00	1.00	1.00	1.00											
A40 0.00	ASPHALT & CONCRETE MILLERS / PROFILERS / PLANERS		1.03	1.00	1.00	1.00	1.00											
A45 0.00	ASPHALT RECYCLERS & SEALERS		1.03	1.00	1.00	1.00												
B10 0.00	BATCH PLANTS, ASPHALT & CONCRETE																	
B10 0.10	ASPHALT		1.03	1.00	1.00	1.00	1.00	0.98	0.96									
B10 0.20	CONCRETE		1.03	1.00	1.00	1.00	1.00	0.98	0.96									
B10 0.30	PUGMILL		1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94								
B15 0.00	BROOMS, STREET SWEEPERS & FLUSHERS		1.11	1.00	1.02	1.00	0.99	0.98	0.97									
B20 0.00	BRUSH CHIPPERS		1.11	1.00	1.02	1.00	0.99	0.98	0.97									
B25 0.00	BUCKETS, CLAMSHELL		1.10	1.06	1.03	1.00	0.93	0.95	0.96									
B30 0.00	BUCKETS, CONCRETE																	

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 SUB	TYPE OF EQUIPMENT	Life in Years		Year Purchased New															
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
B30	0.10	GENERAL PURPOSE, MANUAL TRIP	1.09	1.05	1.03	1.00	0.93	0.95	0.96											
B30	0.20	LAYDOWN	1.09	1.05	1.03	1.00	0.93	0.95	0.96											
B30	0.30	LOWBOY	1.09	1.05	1.03	1.00	0.93	0.95	0.96											
B30	0.40	LOW SLUMP	1.09	1.05	1.03	1.00	0.93	0.95	0.96											
B35	0.00	BUCKETS, DRAGLINE																		
B35	0.10	LIGHT WEIGHT	1.10	1.06	1.03	1.00	0.93	0.95	0.96											
B35	0.20	MEDIUM WEIGHT	1.10	1.06	1.03	1.00	0.93	0.95	0.96	0.95										
B35	0.30	HEAVY WEIGHT	1.10	1.06	1.03	1.00	0.93	0.95	0.96	0.95										
C05	0.00	CHAIN SAWS	1.11	1.00		1.00														
C10	0.00	COMPACTORS, WALK-BEHIND OR REMOTE CONTROLLER																		
C10	0.10	COMPACTORS, RAMMERS / TAMPERS & VIBRATORY PLATES	1.10	1.00	1.02	1.00														
C10	0.20	ROLLERS, VIBRATORY	1.12	1.00	1.02	1.00														
C15	0.00	CONCRETE CLEANERS / BLASTERS	1.12	1.00	1.02	1.00														
C20	0.00	CONCRETE BUGGIES	1.12	1.00	1.02	1.00														
C25	0.00	CONCRETE FINISHERS/SCREEDS/SPREADERS																		
C25	0.10	FINISHERS/TROWELS	1.12	1.00	1.02	1.00														
C25	0.20	VIBRATORY SCREED	1.12	1.00	1.02	1.00														
C25	0.25	VIBRATORY LASER SCREED	1.14	1.00	1.02	1.00	0.98	0.98	0.96											
C25	0.30	MATERIAL/TOPPING SPREADERS	1.14	1.00	1.02	1.00	0.98	0.98	0.96											
C30	0.00	CONCRETE GRINDERS	1.12	1.00	1.02	1.00														
C35	0.00	CONCRETE GUNITERS / SHOTCRETTERS	1.13	1.00	1.02	1.00	0.98	0.98												
C40	0.00	CONCRETE MIXING UNITS	1.12	1.00	1.02	1.00														
C45	0.00	CONCRETE PAVING MACHINES	1.03	1.00	1.00	1.00	1.00													
C55	0.00	CONCRETE PUMPS	1.11	1.00	1.02	1.00	0.99	0.98	0.97											
C60	0.00	CONCRETE SAWS (Add cost for sawblade wear)	1.11	1.00	1.02	1.00	0.99													
C65	0.00	CONCRETE VIBRATORS	1.04	1.01	1.00	1.00														
C70	0.00	CRANES, GANTRY & STRADDLE																		

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 SUB	TYPE OF EQUIPMENT	Life in Years							Year Purchased New														
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17				
			2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988				
C75 0.00		CRANES, HYDRAULIC, SELF-PROPELLED	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.91	0.88	0.86	0.84										
C80 0.00		CRANES, HYDRAULIC, TRUCK MOUNTED																						
C80 0.01		UNDER 26 TON	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.91	0.88	0.86	0.84										
C80 0.02		26 TON THRU 65 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83									
C80 0.03		66 TON THRU 125 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74							
C80 0.04		OVER 125 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74	0.72						
C85 0.00		CRANES, MECHANICAL, LATTICE BOOM, CRAWLER MOUNTED																						
C85 0.11		DRAGLINE, CLAMSHELL, 0 THRU 1.0 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.92	0.90	0.88	0.85	0.83										
C85 0.12		DRAGLINE, CLAMSHELL, OVER 1.0 CY THRU 2.5 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82									
C85 0.13		DRAGLINE, CLAMSHELL, OVER 2.5 CY THRU 5.0 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73							
C85 0.14		DRAGLINE, CLAMSHELL, OVER 5.0 CY	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.86	0.84	0.83	0.79	0.74	0.71						
C85 0.21		LIFTING, 0 THRU 25 TON	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82									
C85 0.22		LIFTING, 26 TON THRU 50 TON	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73							
C85 0.23		LIFTING, 51 TON THRU 150 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74	0.72						
C85 0.24		LIFTING, OVER 150 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.68	0.63				
C90 0.00		CRANES, MECHANICAL, LATTICE BOOM, TRUCK MOUNTED																						
C90 0.01		UNDER 26 TON	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.91	0.88	0.86	0.84										
C90 0.02		26 TON THRU 65 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83									
C90 0.03		66 TON THRU 125 TON	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73							
C90 0.04		OVER 125 TON	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.86	0.84	0.83	0.79	0.74	0.71						
C95 0.00		CRANES, TOWER	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73							
D10 0.00		DRILLS, AIR/HYDRAULIC, CRWL'R MTD, 0" THRU 6.5" DIA HOLE (Add cost for drill steel and bit wear)																						
D10 0.10		AIR TRACK (Add cost for drill steel and bit wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.87	0.85	0.84	0.82	0.78	0.76										
D10 0.20		HYDRAULIC TRACK (Add cost for drill steel and bit wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.86	0.85														
D15 0.00		DRILLS, HORIZONTAL BORING & GROUND PIERCING (Add cost for drill steel and bit wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.86	0.85														
D20 0.00		DRILLS, CORE, COLUMN MOUNTED (Add cost for drill steel and bit wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.86															
D25 0.00		DRILLS, CORE & DOWELLING (Add cost for drill steel and bit wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.86	0.85														

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 TYPE OF EQUIPMENT	<u>Year Purchased New</u>																
		<u>Life in Years</u>																
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989
D30 0.00	DRILLS, EARTH / AUGER (Add cost for drill steel and cutting edge wear)	1.17	1.10	1.02	1.00	0.91	0.88	0.86	0.85									
D35 0.00	DRILLS, ROTARY BLASTHOLE (Add cost for drill steel and bit wear)																	
D35 0.11	DIESEL, 4.5" THRU 9.875" DIAMETER HOLE (Add cost for drill steel and bit wear)	1.16	1.09	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.83	0.79	0.77					
D35 0.12	DIESEL, OVER 9.875" DIAMETER (Add cost for drill steel and bit wear)	1.15	1.09	1.02	1.00	0.92	0.89	0.88	0.86	0.85	0.83	0.80	0.77	0.76	0.74	0.73		
D35 0.21	ELECTRIC, 4.5" THRU 9.875" DIAMETER HOLE (Add cost for drill steel and bit wear)	1.16	1.09	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.83	0.79	0.77					
D35 0.22	ELECTRIC, OVER 9.875" DIAMETER (Add cost for drill steel and bit wear)	1.15	1.09	1.02	1.00	0.92	0.89	0.88	0.86	0.85	0.83	0.80	0.77	0.76	0.74	0.73		
F10 0.00	FORK LIFTS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
G10 0.00	GENERATOR SETS																	
G10 0.10	PORTABLE	1.09	1.02	1.00	1.00	1.00	1.00	0.99										
G10 0.20	SKID MOUNTED	1.08	1.02	1.00	1.00	1.00	1.00	0.99	0.99									
G15 0.00	GRADERS, MOTOR	1.09	1.06	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.88	0.82	0.80					
H10 0.00	HAMMERS, HYDRAULIC (Demolition tool) (Add cost for point wear)	1.12	1.00	1.02	1.00	0.98												
H13 0.00	HAZARDOUS/TOXIC WASTE EQUIPMENT																	
H13 0.11	COMPACTORS (Compression force) 0 THRU 50 TONS	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96									
H13 0.12	COMPACTORS (Compression force) OVER 50 TONS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91							
H13 0.21	FILTER PRESSES, STATIONARY	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
H13 0.22	FILTER PRESSES, MOBILE	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96									
H13 0.30	CENTRIFUGES	1.12	1.00	1.02	1.00													
H13 0.40	SHREDDERS	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96									
H13 0.51	SOIL TREATMENT PLANT, MOBILE	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96									
H13 0.61	SLUDGE PROCESSING EQUIP, SLUDGE DISPENSERS	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96									
H13 0.71	WASTE HANDLING EQUIPMENT, DRUM HANDLING	1.12	1.00	1.02	1.00													
H15 0.00	HEATERS, SPACE																	
H20 0.00	HOISTS & AIR WINCHES	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
H25 0.00	HYDRAULIC EXCAVATORS, CRAWLER MOUNTED																	
H25 0.10	0 LBS THRU 12,500 LBS (COMPACT EXCAVATORS)	1.12	1.07	1.03	1.00	0.92	0.94	0.93										
H25 0.11	OVER 12,500 LBS THRU 40,000 LBS	1.12	1.07	1.03	1.00	0.92	0.94	0.93										

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4	TYPE OF EQUIPMENT	Life in Years							Year Purchased New														
			0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988				
H25	0.12	OVER 40,000 LBS THRU 100,000 LBS	1.11	1.06	1.03	1.00	0.92	0.94	0.93	0.92	0.89	0.87												
H25	0.13	OVER 100,000 LBS THRU 160,000 LBS	1.11	1.06	1.03	1.00	0.92	0.94	0.94	0.92	0.90	0.88	0.85	0.82	0.81									
H25	0.14	OVER 160,000 LBS	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.92	0.90	0.88	0.85	0.83	0.82	0.78	0.72	0.69						
H25	0.21	ATTACHMENTS, MOBILE SHEARS	1.12	1.00	1.02	1.00	0.98																	
H25	0.22	ATTACHMENTS, MATERIAL HANDLING	1.12	1.00	1.02	1.00	0.98																	
H25	0.23	ATTACHMENTS, CONCRETE PULVERIZERS	1.12	1.00	1.02	1.00	0.98																	
H25	0.24	ATTACHMENTS, COMPACTORS	1.12	1.00	1.02	1.00	0.98																	
H30	0.00	HYDRAULIC EXCAVATORS, WHEEL MOUNTED																						
H30	0.01	0 THRU 1.0 CY	1.12	1.07	1.03	1.00	0.92	0.94	0.93															
H30	0.02	OVER 1.0 CY	1.12	1.07	1.03	1.00	0.92	0.94	0.93	0.92														
H35	0.00	HYDRAULIC SHOVELS, CRAWLER MOUNTED																						
H35	0.11	DIESEL, 0 CY THRU 5.0 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.92	0.90	0.88	0.85	0.83										
H35	0.12	DIESEL, OVER 5.0 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82									
H35	0.21	ELECTRIC, OVER 2.5 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73							
L10	0.00	LAND CLEARING EQUIPMENT	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94														
L15	0.00	LANDSCAPING EQUIPMENT	1.12	1.00	1.02	1.00																		
L20	0.00	LIGHTING SETS, TRAILER MOUNTED																						
L20	0.10	METALLIC VAPOR	1.12	1.00	1.02	1.00	0.98	0.98	0.97															
L25	0.00	LINE STRIPING EQUIPMENT	1.12	1.00	1.02	1.00	0.98	0.98	0.97															
L30	0.00	LOADERS, BELT (Conveyor belts) & ACCESSORIES	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95														
L35	0.00	LOADERS, FRONT END, CRAWLER TYPE	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94														
L40	0.00	LOADERS, FRONT END, WHEEL TYPE																						
L40	0.11	ARTICULATED, 0 THRU 225 HP	1.10	1.06	1.02	1.00	1.00	0.99	0.98	0.95														
L40	0.12	ARTICULATED, OVER 225 HP	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.93	0.92	0.89											
L40	0.20	SKID STEER	1.10	1.05	1.02	1.00	1.00	0.99	0.98															
L40	0.21	SKID STEER ATTACHMENTS	1.10	1.05	1.02	1.00																		
L40	0.31	TOOL CARRIER & TELESCOPIC HANDLERS, 0 THRU 225 HP	1.10	1.06	1.02	1.00	1.00	0.99	0.98	0.95														

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 TYPE OF EQUIPMENT	<u>Year Purchased New</u>																
		<u>Life in Years</u>																
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989
L40 0.32	TOOL CARRIER & TELESCOPIC HANDLERS, OVER 225 HP	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.94	0.93							
L45 0.00	LOADERS / BACKHOE, CRAWLER TYPE	1.10	1.05	1.02	1.00	1.00	0.99	0.98										
L50 0.00	LOADERS / BACKHOE, WHEEL TYPE	1.10	1.06	1.02	1.00	1.00	0.99	0.98	0.95									
L55 0.00	LOADER / BACKHOE, ATTACHMENTS	1.12	1.00	1.02	1.00	0.98												
L60 0.00	LOG SKIDDERs	1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92									
M10 0.00	MARINE EQUIPMENT (NON DREDGING)																	
M10 0.11	AQUATIC MAINTENANCE	1.15	1.12	1.05	1.00	0.99	0.96	0.94	0.93									
M10 0.12	AQUATIC MAINTENANCE ATTACHMENTS	1.16	1.13	1.05	1.00	0.98												
M10 0.21	HYDRAULIC CUTTERHEAD DREDGE, 8" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.83	0.82				
M10 0.22	HYDRAULIC CUTTERHEAD DREDGE, 8" - 12", TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.83	0.82				
M10 0.23	HYDRAULIC AUGERHEAD DREDGE, 12" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.83	0.82				
M10 0.24	HYDRAULIC FLOATING PUMPS, 12" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95										
M10 0.25	HYDRAULIC DREDGE PUMPS, 12" OR LESS, TRANSPORTABLE	1.15	1.12	1.05	1.00	0.98												
M10 0.26	HYDRAULIC DREDGE / PUMP ATTACHMENTS	1.15	1.12	1.05	1.00	0.98												
M10 0.31	SMALL MECH DREDGES, CLAMSHELL, BARGE-MTD TO 5 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74		
M10 0.32	SMALL MECH DREDGES, AMPHIBIOUS EXCAVATORS	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93									
M10 0.33	SMALL MECH DREDGES, HOE-MOUNTED DREDGING ATTACH	1.15	1.11	1.05	1.00	0.99	0.96	0.94	0.94	0.92	0.89	0.85	0.83	0.82	0.78	0.73	0.70	
M10 0.41	WORK FLOATS (NON-DREDGING)	1.15	1.11	1.05	1.00	0.99												
M10 0.42	WORK BARGES (SECTIONAL, NON-DREDGING)	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.84	0.83	0.79	0.75	0.72	0.68
M10 0.45	FLAT-DECK OR CARGO BARGE (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.73	0.70
M10 0.46	DUMP SCOW (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.73	0.70
M10 0.47	DRILL BARGE (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.86	0.84	0.83	0.80	0.75	0.72	0.69
M10 0.48	ALL OTHER BARGES (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.86	0.84	0.83	0.80	0.75	0.72	0.69
M10 0.51	BOATS & LAUNCHES, 0 THRU 250 HP	1.15	1.11	1.05	1.00	0.99	0.96	0.94	0.94	0.92	0.88	0.84	0.83	0.81				
M10 0.53	BOATS & LAUNCHES, 251 THRU 500 HP	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.84	0.82	0.78	0.74		
M10 0.54	TUGS, 501 THRU 1,000 HP	1.14	1.10	1.05	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.69
M10 0.55	TUGS, 1,000 THRU 2,000 HP	1.13	1.10	1.04	1.00	0.99	0.96	0.95	0.94	0.93	0.90	0.86	0.84	0.83	0.80	0.75	0.73	0.69

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 SUB	TYPE OF EQUIPMENT	<u>Life in Years</u>										<u>Year Purchased New</u>															
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17								
			2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988								
P10 0.00	PILE HAMMER ACCESSORIES - EXTRACTORS & BOX LEADS		1.15	1.00	1.02	1.00	0.98																					
P20 0.00	PILE HAMMERS, DOUBLE ACTING																											
P20 0.10	DIESEL		1.13	1.00	1.02	1.00	0.98																					
P20 0.20	PNEUMATIC (STEAM/AIR)		1.12	1.00	1.02	1.00	0.98																					
P25 0.00	PILE HAMMERS, SINGLE ACTING																											
P25 0.10	DIESEL		1.12	1.00	1.02	1.00	0.98																					
P25 0.20	PNEUMATIC (STEAM/AIR)		1.12	1.00	1.02	1.00	0.98																					
P30 0.00	PILE HAMMERS, DRIVER/ EXTRACTOR, VIBRATORY		1.12	1.00	1.02	1.00	0.98																					
P35 0.00	PIPELAYERS		1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.91	0.87	0.84														
P40 0.00	PLATFORMS & MAN-LIFTS		1.10	1.06	1.03	1.00	0.93	0.95	0.94																			
P45 0.00	PUMPS, GROUT		1.11	1.00	1.02	1.00	0.98	0.98	0.97																			
P50 0.00	PUMPS, WATER, CENTRIFUGAL, TRASH																											
P50 0.11	ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P50 0.12	ELECTRIC DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P50 0.21	WHEEL MOUNTED, ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P50 0.22	WHEEL MOUNTED, ELECTRIC DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P50 0.31	HOSES, PUMP, SUCTION & DISCHARGE		1.11	1.00	1.02	1.00																						
P55 0.00	PUMPS, WATER, SUBMERSIBLE																											
P55 0.01	ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P55 0.02	ELECTRIC DRIVE		1.11	1.00	1.02	1.00	0.98	0.98	0.97																			
P60 0.00	PUMPS, WATER, CENTRIFUGAL, DEWATERING																											
P60 0.11	SKID MOUNTED, ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P60 0.12	SKID MOUNTED, ELECTRIC DRIVE		1.11	1.00	1.02	1.00	0.98	0.98	0.97																			
P60 0.21	WHEEL MOUNTED, ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			
P60 0.22	WHEEL MOUNTED, ELECTRIC DRIVE		1.11	1.00	1.02	1.00	0.98	0.98	0.97																			
P65 0.00	PUMPS, WATER, DIAPHRAGM																											
P65 0.11	SKID MOUNTED, ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97																			

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4	TYPE OF EQUIPMENT	Year Purchased New																	
			Life in Years							Year Purchased New										
			0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
P65 0.12	SKID MOUNTED, ELECTRIC DRIVE		1.11	1.00	1.02	1.00	0.98	0.98	0.97											
P65 0.21	WHEEL MOUNTED, ENGINE DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
P65 0.22	WHEEL MOUNTED, ELECTRIC DRIVE		1.11	1.00	1.02	1.00	0.98	0.98	0.97											
P70 0.00	PUMPS, WATER (For core drills)																			
P70 0.01	ENGINE DRIVE		1.13	1.00	1.02	1.00	0.98	0.98	0.97											
P70 0.02	ELECTRIC DRIVE		1.13	1.00	1.02	1.00	0.98	0.98	0.97											
R10 0.00	RIPPERS & HYDRAULIC BANK SLOPERS (Add cost for point wear)		1.10	1.05	1.02	1.00	1.00	0.99	0.98											
R15 0.00	ROLLERS, STATIC, TOWED, PNEUMATIC		1.11	1.08	1.03	1.00	0.99	0.96	0.98	0.96										
R20 0.00	ROLLERS, STATIC, TOWED, STEEL DRUM		1.11	1.08	1.03	1.00	0.99	0.96	0.98	0.96										
R30 0.00	ROLLERS, STATIC, SELF-PROPELLED																			
R30 0.01	PNEUMATIC		1.10	1.08	1.03	1.00	0.99	0.97	0.98											
R30 0.02	SMOOTH DRUM		1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96										
R30 0.03	TAMPING FOOT, LANDFILL & SOIL COMPACTORS		1.11	1.08	1.03	1.00	0.99	0.96	0.98	0.96	0.94	0.92								
R40 0.00	ROLLERS, VIBRATORY, TOWED		1.11	1.08	1.03	1.00	0.99	0.96	0.98											
R45 0.00	ROLLERS, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM		1.11	1.08	1.03	1.00	0.99	0.96	0.98											
R50 0.00	ROLLERS, VIBRATORY, SELF-PROPELLED, SINGLE DRUM		1.11	1.09	1.03	1.00	0.99	0.96	0.98											
R55 0.00	ROOFING EQUIPMENT		1.12	1.00	1.02	1.00	0.98													
S10 0.00	SCRAPERS, ELEVATING																			
S10 0.01	0 THRU 200 HP		1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93										
S10 0.02	OVER 200 HP		1.10	1.06	1.01	1.00	0.99	0.98	0.96	0.92	0.90	0.88	0.82							
S15 0.00	SCRAPERS, CONVENTIONAL		1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.83	0.81						
S20 0.00	SCRAPERS, TANDEM POWERED		1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.83	0.81						
S25 0.00	SCRAPERS, TRACTOR DRAWN		1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.83	0.81						
S30 0.00	SCREENING & CRUSHING PLANTS																			
S30 0.10	CONVEYORS		1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96										
S30 0.20	CRUSHERS - VERTICAL & HORIZONTAL SHAFT IMPACTOR		1.10	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.84	0.82	0.79	0.76	0.72
S30 0.21	CRUSHERS - CONE		1.10	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.84	0.82	0.79	0.76	0.72

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4	TYPE OF EQUIPMENT	Year Purchased New																	
			Life in Years								Year Purchased New									
			0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
S30 0.22	CRUSHERS - JAW		1.10	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.84	0.82	0.79	0.76	0.72
S30 0.30	SCREENING PLANT		1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96										
S35 0.00	SNOW REMOVAL EQUIPMENT		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
S40 0.00	SOIL & ROAD STABILIZERS		1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93										
S45 0.00	SPLITTERS, ROCK & CONCRETE		1.12	1.00	1.02	1.00	0.98													
T10 0.00	TRACTOR BLADES & ATTACHMENTS		1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94										
T15 0.00	TRACTORS, CRAWLER (DOZER) (includes blade)																			
T15 0.01	0 THRU 225 HP		1.11	1.06	1.02	1.00	0.99	0.99	0.97	0.94										
T15 0.02	226 HP THRU 425 HP		1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.90								
T15 0.03	OVER 425 HP		1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.91	0.87	0.84						
T20 0.00	TRACTORS, WHEEL TYPE (DOZER)		1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92	0.90	0.88	0.88	0.87						
T25 0.00	TRACTORS, AGRICULTURAL																			
T25 0.10	CRAWLER		1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92										
T25 0.20	WHEEL		1.10	1.08	1.03	1.00	0.99	0.97	0.95											
T30 0.00	TRENCHERS, CHAIN TYPE CUTTER		1.00	1.00	1.00	1.00	0.99	0.97	0.95											
T35 0.00	TRENCHERS, WHEEL TYPE CUTTER		1.00	1.00	1.00	1.00	0.99	0.97	0.95											
T40 0.00	TRUCK OPTIONS																			
T40 0.10	CRANES / HOISTS, PERSONNEL & MATERIAL HANDLING		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
T40 0.20	DUMP BODY, REAR		1.11	1.00	1.02	1.00	0.99	0.98	0.97											
T40 0.30	FLATBEDS, WITH SIDES		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
T40 0.41	HOIST, ELECTRIC DRIVE		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
T40 0.50	TRANSIT MIXERS		1.11	1.00	1.02	1.00	0.98	0.98	0.97											
T40 0.60	WATER TANKS		1.13	1.00	1.02	1.00	0.98	0.98	0.97											
T40 0.70	ALL OTHER OPTIONS		1.12	1.00	1.02	1.00	0.98	0.98	0.97											
T45 0.00	TRUCK TRAILERS																			
T45 0.10	BOTTOM DUMP		1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96										
T45 0.20	END DUMP		1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96										

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4 TYPE OF EQUIPMENT	<u>Life in Years</u>																
		<u>Year Purchased New</u>																
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989
T45 0.30	PUP TRAILER	1.11	1.00	1.02	1.00	0.99	0.98	0.97										
T45 0.41	LOWBOY, RIGID NECK, DROP DECK	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96									
T45 0.50	FLATBED TRAILER	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96									
T45 0.60	MISCELLANEOUS / UTILITY	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96									
T45 0.70	WATER TANKER TRAILER	1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
T45 0.80	DECONTAMINATION FACILITY	1.13	1.00	1.02	1.00	0.98	0.98	0.97										
T45 0.90	TANK TRAILERS	1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
T50 0.00	TRUCKS, HIGHWAY (Add attachments as required)																	
T50 0.01	0 THRU 10,000 GVW	1.07	1.04	1.01	1.00	0.97	0.97	1.00										
T50 0.02	OVER 10,000 THRU 30,000 GVW (Chassis only - Add options)	1.07	1.04	1.01	1.00	0.97	0.97	1.00	0.97									
T50 0.03	OVER 30,000 GVW (Chassis only - Add options)	1.07	1.04	1.01	1.00	0.98	0.97	1.00	0.98	0.98	1.00							
T55 0.00	TRUCKS, OFF-HIGHWAY																	
T55 0.10	RIGID FRAME	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.77	0.76	0.74	
T55 0.20	ARTICULATED FRAME	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86						
T56 0.00	TRUCKS, OFF-HIGHWAY/PRIME MOVER TRACTORS & WAGONS																	
T56 0.10	PRIME MOVER TRACTORS	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.77	0.76	0.74	
T56 0.20	WAGONS, BOTTOM DUMP	1.17	1.08	1.01	1.00	0.98	0.96	0.94	0.93	0.91	0.88	0.85	0.79					
T56 0.30	WAGONS, REAR DUMP	1.17	1.08	1.01	1.00	0.98	0.96	0.94	0.92	0.91	0.88							
T57 0.00	TRUCKS, VACUUM	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
T60 0.00	TRUCKS, WATER, OFF-HIGHWAY	1.17	1.08	1.01	1.00	0.98	0.96	0.94	0.92	0.91	0.88							
T65 0.00	TUNNEL/MINING EQUIPMENT																	
T65 0.10	DRIFTING & TUNNELING DRILLS	1.15	1.09	1.02	1.00	0.92	0.89	0.88	0.86	0.85	0.83	0.80	0.78					
T65 0.20	TUNNEL BORING MACHINES	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81		
T65 0.30	PRODUCTION DRILLING RIGS	1.15	1.09	1.02	1.00	0.92	0.89	0.88	0.86	0.85	0.83							
T65 0.40	ROADHEADERS & CONTINUOUS MINERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86				
T65 0.50	ROCK BOLTING EQUIPMENT	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95									
T65 0.61	LOADING & HAULING EQUIPMENT, DIESEL OR GAS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91							

**Table 3-1 Equipment Age Adjustment Factors for Ownership Cost**

CATEGORY	REGION 4	TYPE OF EQUIPMENT	Life in Years										Year Purchased New														
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17							
			2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988							
T65 0.62	LOADING & HAULING EQUIPMENT, ELECTRIC		1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86													
T65 0.63	LOADING & HAULING EQUIPMENT, AIR-POWERED		1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95																	
T65 0.70	LOCOMOTIVES		1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91															
T65 0.90	OTHER TUNNELING EQUIPMENT		1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95																	
W10 0.00	WAGONS, BOTTOM DUMP		1.17	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89															
W15 0.00	WAGONS, REAR DUMP		1.17	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89															
W25 0.00	WATER & CO <sub>2</sub> BLASTERS																										
W25 0.10	LOW PRESSURE, (< 5,000 PSI)		1.12	1.00	1.02	1.00																					
W25 0.20	HIGH PRESSURE, (>= 5,000 PSI)		1.12	1.00	1.02	1.00																					
W25 0.30	STEAM CLEANERS		1.12	1.00	1.02	1.00																					
W25 0.40	CO <sub>2</sub> BLASTERS		1.12	1.00	1.02	1.00	0.98																				
W25 0.50	WET ABRASIVE BLASTING SYSTEM (TURBO)		1.14	1.00	1.02	1.00	0.98	0.98	0.96	0.94																	
W30 0.00	WATER TANKS																										
W30 0.10	PORTABLE WITH WHEELS		1.17	1.08	1.01	1.00	0.98	0.96	0.94	0.92	0.91	0.88															
W30 0.20	SKID MOUNTED		1.17	1.08	1.01	1.00	0.98	0.96	0.94	0.92	0.91	0.88															
W35 0.00	WELDERS																										
W35 0.10	ENGINE DRIVEN		1.13	1.00	1.02	1.00	0.98	0.98	0.97																		
W35 0.20	ELECTRIC DRIVEN		1.12	1.00	1.02	1.00	0.98																				

## TOTAL HOURLY RATE CALCULATION FOR OVERAGE EQUIPMENT

### EXAMPLE

Assume the following set of given information for the rate calculation example:

1. The unit of equipment is not listed in table 2-1.
2. The equipment is contractor owned.
3. Data for the unit in question:
  - a. Caterpillar front-end wheel loader
  - b. Model 966D, 4WD, 4 CY capacity
  - c. Serial number indicates year of manufacture = 1987
  - d. Actual purchase price in 1987 = \$187,255  
(includes all regional discounts, sales tax and freight)
  - e. Horsepower is 200 hp (fuel is Diesel off-road)
  - f. Drive tire (DT) size = 23.50 x 25, 16 ply, L-3  
DT cost (2005) = 4 tires x \$1,954.00 = \$7,816.00
  - g. Weight = 44,400 lbs
4. Table 3-1, Age Adjustment Factors for Ownership Costs:
  - a. The category L40, subcategory 0.11 (wheel loaders < 225 hp)
  - b. The year corresponding to the last age adjustment factor = 1998
5. Adjust the actual purchase price:
  - a. Economic Indexes from appendix E (wheel loaders EK = 45)
    - (1) For 1998 (first year of economic life), the economic index = 5409
    - (2) For 1987 (year of manufacture), the economic index = 4099
  - b. Purchase price [total equipment value (TEV)] indexed to 1999 (first year of economic life): (Purchase price includes discount, sales tax, and freight for this region).
$$(5409/4099) \times \$187,255 = \$247,100 (=1998 purchase price)$$
6. Hourly rate is computed as follows in accordance with figure 2-1, Equipment Rate Computation Worksheet.

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

Use this worksheet to compute rates for equipment that is not in this pamphlet.

**1. EQUIPMENT INFORMATION AND EXPENSE FACTORS**

ID No.: \_\_\_\_\_

a. Equipment Specification Data:

- (1) Equipment Description: Caterpillar front-end wheel loader  
(2) Model and Series: Model 966D, 4WD, 4 CY capacity  
(3) Year of Use: 2005  
(4) Year Manufactured: 1987 (Indexed to 1998)  
(5) Horsepower - Equipment: 200  
(6) Horsepower - Carrier:  
(7) Fuel type: - Equipment: gas/diesel off-road/diesel on-road/electric/air D-off  
- Carrier: gas/diesel off-road/diesel on-road/electric/air \_\_\_\_\_  
(8) Shipping Weight (cwt): 444 cwt  
(9) Tire size and number of tires: (Cost of tires based on year of use – see 1.a.(3) and appendix F)

	No.	Size/Ply	Unit Price	Cost
(a) Front (FT):	_____	_____	\$ _____	\$ _____
(b) Drive (DT):	4-ANNB5	23.5x25/16 ply	\$ 1,954.00	\$ 7,816.00
(c) Trailing (TT):	_____	_____	\$ _____	\$ _____
(d) Total Tire Cost:				\$ 7,816.00

**USE APPENDIX D TO COMPLETE THE FOLLOWING DATA:**

- b. Category and Subcategory Number: L40 0.11  
c. Hourly Expense Calculation Factors:  
(1) Economic Key (EK): 45  
(2) Condition (C): X Average or Severe or Difficult  
(3) Discount Code (DC): B = 7.5% (0.075) – or – S = 15.0% (0.15) 0.075  
(4) Life in Hours (LIFE): 9,250  
(5) Salvage Value Percentage (SLV): 0.25  
(6) Fuel Factor – Equipment [Electric (E) Gas (G) Diesel (D)]: 0.031  
(7) Fuel Factor – Carrier (E G D): 0.000  
(8) Filters, Oil, and Grease (FOG) Factor (E G D): 0.445  
(9) Tire Wear Factor:  
(a) Front (FT): 0.00  
(b) Drive (DT): 0.54  
(c) Trailing (TT): 0.00  
(10) Repair Cost Factor (RCF): 0.70

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

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## 2. EQUIPMENT VALUE

- a. List Price + Accessories: [at Year of Manufacture] = \$ \_\_\_\_\_
- (1) Discount: (List Price + Accessories) x (Discount Code)  
[1.c.(3)]  
(\$ \_\_\_\_\_ + \$ \_\_\_\_\_) x (\_\_\_\_\_ ) =-(\$ \_\_\_\_\_)
- (2) Subtotal [2.a.] – [2.a.(1)] Subtotal= \$ \_\_\_\_\_
- (3) Sales or Import Tax: (Subtotal) x (Tax Rate)  
[2.a.(2)] [Appendix B]  
(\$ \_\_\_\_\_) x (\_\_\_\_\_ ) =+\$ \_\_\_\_\_
- (4) Total Discounted Price: Subtotal: [2.a.(2)] + [2.a.(3)] Subtotal= \$ \_\_\_\_\_
- b. Freight: (Shipping Weight) x (Freight Rate per cwt)  
[1.a.(8)] [Appendix B]  
(\_\_\_\_\_ cwt) x (\$ \_\_\_\_\_ /cwt) =+\$ \_\_\_\_\_
- c. **TOTAL EQUIPMENT VALUE (TEV):** **TOTAL[2.]:=\$** 247,100.00  
[(2.a.(4)) + [(2.b)]]  
(See chapter 3 for used and overage equipment rate adjustments.)

## 3. DEPRECIATION PERIOD (N)

- a. (LIFE hours (hr)) / (Working Hours Per Year (WHPY)) = N  
[1.c.(4)] [Appendix B]  
(9,250 hr) / (1,260 hr/yr) = 7.34

## 4. OWNERSHIP COST

- a. Depreciation
- (1) Tire Cost Index (TCI):  
(Tire Index, Yr of Mfg) / (Tire Index, Based on 1.a.(3)) = Tire Cost Index (TCI)  
[Appendix E, EK=100] [Appendix E, EK=100]  
(2400) / (2735) = 0.878 (TCI)  
(For 1998) (For 2005)
- (2)  $\frac{[(TEV) \times [1.0 - (SLV)]] - [(TCI) \times (Tire Cost)]]}{(LIFE)}$   
[2.c.] [1.c.(5)] [4.a.(1)] [1.a.(9)(d)] [1.c.(4)]  
[(\$247,100.00) \times [1.0 - (0.250)]] - [(0.878) \times (\$7,816.00)] / (9,250 hr) = \$ 19.29 /hr

**Figure 3-1. Standby Hourly Rate Calculation for Overage Equipment**

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**4. OWNERSHIP COST (Continued)**

b. Facilities Capital Cost of Money (FCCM):

$$(1) \frac{[(N) - 1.0] \times [1.0 + (SLV)] + 2.0}{[2.0 \times (N)]} = \text{Avg Value Factor}$$

[3.a.] [1.c.5.] [3.a.] (AVF)

$$[(7.34 \text{ yr}) - 1.0] \times [1.0 + (0.250)] + 2.0 / [2.0 \times (7.34 \text{ yr})]$$

$$= 0.676 \text{ (AVF)}$$

$$(2) (\text{TEV}) \times (\text{AVF}) \times (\text{Adjusted Cost - of - Money}) / (\text{WHPY})$$

[2.c] [4.b.(1)] [Appendix B] [Appendix B]

$$(\$247,100.00) \times (0.676) \times (0.034) / (1,260 \text{ hr/yr})$$
$$= \$ 4.51 \text{ /hr}$$

c. **TOTAL HOURLY OWNERSHIP COST: TOTAL [4.]:**  $= \$ 23.80 \text{ /hr}$

[4.a.(2)] + [4.b.(2)]

**5. OPERATING COST**

a. Fuel Costs:

(1) Equipment:

$$(\text{Fuel Factor} \times (\text{Horsepower (hp)}) \times (\text{Fuel Cost Per Gallon (gal)}))$$

[1.c.(6)] [1.a.(5)] [Appendix B]

$$(0.031) \times (200 \text{ hp}) \times (\$1.57 \text{ / gal}) = \$ 9.73 \text{ /hr}$$

(2) Carrier:

$$(\text{Fuel Factor} \times (\text{Horsepower}) \times (\text{Fuel Cost Per Gallon}))$$

[1.c.(7)] [1.a.(6)] [Appendix B]

$$(0.000) \times (0 \text{ hp}) \times (\$0.00 \text{ /gal}) = \$ 0.00 \text{ /hr}$$

(3) Total Hourly Fuel Cost:  $\text{Total [5.a.]} = \$ 9.73 \text{ /hr}$

[(5.a.(1)) + (5.a.(2))]

b. FOG Cost:

(1) Equipment:

$$(\text{FOG Factor} \times (\text{Equipment Fuel Cost}) \times (\text{Labor Adjustment Factor (LAF)}))$$

[1.c.(8)] [5.a.(1)] [Appendix B]

$$(0.445) \times (\$9.73 \text{ /hr}) \times (1.08) = \$ 4.68 \text{ /hr}$$

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

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**5. OPERATING COST (Continued)**

(2) Carrier:

$$(\text{FOG Factor}) \times (\text{Carrier Fuel Cost}) \times (\text{LAF}) \\ [1.c.(8)] \quad [5.a.(2)] \quad [\text{Appendix B}]$$

$$(0 \underline{\hspace{2cm}}) \times (\$0.00 \underline{\hspace{2cm}} /hr) \times (0 \underline{\hspace{2cm}}) = \$ \underline{\hspace{2cm}} 0.00 /hr$$

(3) Total Hourly FOG Cost:  
[(5.b.(1)) + [5.b.(2)]]

$$\text{Total } [5.b.] = \$ \underline{\hspace{2cm}} 4.68 /hr$$

c. Alternative Fuel/FOG Cost:

$$\text{Total } [5.c.] = \$ \underline{\hspace{2cm}} 0.00 /hr$$

(See chapter 2, paragraph 24.d. for guidance on when to use.)

d. Repair Cost:

(1) Economic Adjustment Factor (EAF):  
(EK is from [1.c.(1)])

$$(\text{Economic Index for Year 1.a.(3)}) / (\text{Economic Index for Year 1.a.(4)}) \\ [Appendix E] \quad [Appendix E]$$

$$\left( \frac{6068}{\text{For 2005}} \right) / \left( \frac{5409}{\text{For 1998}} \right) = 1.122 \text{ (EAF)}$$

(See table 3-1 for last year of economic life.)

(2) Repair Factor (RF):

$$(\text{RCF}) \times (\text{EAF}) \times (\text{LAF}) \\ [1.c.(10)] \quad [5.d.(1)] \quad [\text{Appendix B}] = \text{Repair Factor (RF)}$$

$$(0.70 \underline{\hspace{2cm}}) \times (1.122 \underline{\hspace{2cm}}) \times (1.08 \underline{\hspace{2cm}}) = 0.848 \text{ (RF)}$$

(3) Repair Cost:

$$[(\text{TEV}) - [(\text{TCI}) \times (\text{Tire Cost })]] \times (\text{RF}) / (\text{LIFE}) \\ [2.c.] \quad [4.a.(1)] \quad [1.a.(9)(d)] \quad [5.d.(2)] \quad [1.c.(4)]$$

$$[(\$247,100 \underline{\hspace{2cm}}) - ((0.878 \underline{\hspace{2cm}}) \times (\$7,816.00 \underline{\hspace{2cm}}))] \times (0.848 \underline{\hspace{2cm}}) / (9,250 \underline{\hspace{2cm}})$$

(4) Total Hourly Repair Cost:

$$\text{Total } [5.d.] = \$ \underline{\hspace{2cm}} 22.02 /hr$$

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

5. **OPERATING COST (Continued)**

e. Tire Wear Cost: (Use current price levels. See Appendix F)

(1) Front Tires (FT):

$$[1.5 \times (\text{FT Cost})] / [1.8 \times (\text{FT Wear Factor}) \times (\text{Maximum Tire Life Hours})]$$

[1.a.(9)(a)] [1.c.(9)(a)] [Appendix G]

$$[1.5 \times (\$0.00 \underline{\hspace{2cm}})] / [1.8 \times (0.00 \underline{\hspace{2cm}}) \times (0 \underline{\hspace{2cm}} /hr)]$$

$$=\$ \underline{\hspace{2cm}} 0.00 /hr$$

(2) Drive Tires (DT):

$$[1.5 \times (\text{DT Cost})] / [1.8 \times (\text{DT Wear Factor}) \times (\text{Maximum Tire Life Hours})]$$

[1.a.(9)(b)] [1.c.(9)(b)] [Appendix G]

$$[1.5 \times (\$7,816.00 \underline{\hspace{2cm}})] / [1.8 \times (0.54 \underline{\hspace{2cm}}) \times (3,200 \underline{\hspace{2cm}} /hr)]$$

$$=\$ \underline{\hspace{2cm}} 3.77 /hr$$

(3) Trailing Tires (TT):

$$[1.5 \times (\text{TT Cost})] / [1.8 \times (\text{TT Wear Factor}) \times (\text{Maximum Tire Life Hours})]$$

[1.a.(9)(c)] [1.c.(9)(c)] [Appendix G]

$$[1.5 \times (\$0.00 \underline{\hspace{2cm}})] / [1.8 \times (0 \underline{\hspace{2cm}}) \times (0 \underline{\hspace{2cm}} /hr)]$$

$$=\$ \underline{\hspace{2cm}} 0.00 /hr$$

(4) Total Tire Wear Cost:  
[Sum 5.e.(1) through 5.e.(3)]

$$\textbf{Total [5.e.]} = \$ \underline{\hspace{2cm}} 3.77 /hr$$

f. Tire Repair Cost:

$$(\text{Total Tire Wear Cost}) \times 0.15 \times (\text{LAF})$$

[5.e.(4)] [Appendix B]

$$(\$ \underline{\hspace{2cm}} /hr) \times 0.15 \times (1.08 \underline{\hspace{2cm}})$$

$$\textbf{Total [5.f.]} = \$ \underline{\hspace{2cm}} 0.61 /hr$$

g. **TOTAL HOURLY OPERATING COST:**  
[Sum 5.a. through 5.f.]

$$\textbf{TOTAL [5.]} = \$ \underline{\hspace{2cm}} 40.81 /hr$$

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

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6. **HOURLY RATES**

a. Total Hourly Rate: [based on 40 hours per week (wk)]

(Ownership Cost) + (Operating Cost)

(\$23.80 \_\_\_\_\_ /hr) + (\$40.81 \_\_\_\_\_ /hr)

= \$ \_\_\_\_\_ 64.61 /hr

b. Other Work Shifts Hourly Rate:

(Refer to Chapter 3, *Adjustments to Rates*, for methodology.)

[(Depreciation) + [(FCCM) x (40 hr/wk) / (Work hr/wk)] + (Operating Cost)]  
[4.a.(2)] [4.b.(2)] (example: 60 hr/wk) [5.g.]

[(\$0.00 \_\_\_\_\_ /hr) + [(\$0.00 \_\_\_\_\_ /hr) x (40 hr/wk) / (0 \_\_\_\_\_ hr/wk)] + (\$0.00 \_\_\_\_\_ /hr)]

= \$ \_\_\_\_\_ 0.00 /hr

c. Standby Hourly Rate:

[(Depreciation) x 0.50] + (FCCM)  
[4.a.(2)] [4.b.(2)]

[(\$0.00 \_\_\_\_\_ /hr) x 0.50] + (\$0.00 \_\_\_\_\_ /hr)

= \$ \_\_\_\_\_ 0.00 /hr

**See Chapter 3 if rate adjustments are necessary.**

**Figure 3-1. Total Hourly Rate Calculation for Overage Equipment**

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**Table 3-2. Equipment Age Adjustment Factors**

for

Standby costs

The factors in this table are used when the age of a unit of equipment is other than the age of the equipment listed in table 2-1.

These factors are multiplied by the hourly standby costs shown in table 2-1 and result in a standby rate adjusted for the actual age of the equipment being considered.

When the actual "life" in hours of the unit of equipment has exceeded the economic life given in appendix D, the age will be determined as discussed in chapter 3.

Refer to chapter 3, as follows:

**3-13. Rate Adjustments Overage Equipment Standby**

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years							Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988	
A10 0.00	AGGREGATE / CHIP SPREADERS																			
A10 0.10	SELF-PROPELLED	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.80	0.75	0.72	0.70	
A10 0.20	TOWED & TAILGATE	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.79	0.75	0.72	0.69	
A15 0.00	AIR COMPRESSORS, PORTABLE																			
A15 0.10	ROTARY SCREW	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.97	0.97	0.94	0.94	0.90	0.85	
A15 0.20	SHOP TYPE	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.98	0.97	0.94	0.94	0.90	0.86	
A20 0.00	AIR HOSE, TOOLS & EQUIPMENT																			
A20 0.10	AIR DRILL HOSE	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.98	0.97	0.95	0.94	0.91	0.86	
A20 0.20	SANDBLAST HOSE	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.98	0.97	0.95	0.94	0.91	0.86	
A20 0.30	SANDBLASTERS, BREAKERS, & MISC. AIR TOOLS	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.98	0.97	0.94	0.94	0.91	0.86	
A25 0.00	ASPHALT PAVING DISTRIBUTORS	1.03	1.00	1.00	1.00	1.00	0.99	0.96	0.95	0.92	0.89	0.87	0.85	0.83	0.81	0.81	0.77	0.74	0.72	
A30 0.00	ASPHALT PAVERS & MISCELLANEOUS ROAD EQUIPMENT																			
A30 0.10	SELF PROPELLED	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.95	0.92	0.89	0.87	0.85	0.83	0.80	0.80	0.76	0.73	0.71	
A30 0.20	TOWED	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.95	0.92	0.89	0.86	0.84	0.82	0.79	0.80	0.76	0.73	0.70	
A30 0.30	SLURRY SEAL PAVERS (Cold mix)	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.95	0.92	0.89	0.87	0.84	0.83	0.80	0.80	0.76	0.73	0.71	
A30 0.40	MISCELLANEOUS ROAD EQUIPMENT	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.95	0.92	0.89	0.86	0.84	0.82	0.79	0.80	0.76	0.73	0.70	
A35 0.00	ASPHALT PAVING KETTLES	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.79	0.75	0.72	0.69	
A40 0.00	ASPHALT & CONCRETE MILLERS / PROFILERS / PLANERS	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.79	0.75	0.72	0.69	
A45 0.00	ASPHALT RECYCLERS & SEALERS	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.83	0.82	0.79	0.79	0.75	0.71	0.69	
B10 0.00	BATCH PLANTS, ASPHALT & CONCRETE																			
B10 0.10	ASPHALT	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.80	0.75	0.72	0.70	
B10 0.20	CONCRETE	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.80	0.75	0.72	0.70	
B10 0.30	PUGMILL	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.95	0.92	0.89	0.86	0.84	0.82	0.79	0.80	0.76	0.73	0.70	
B15 0.00	BROOMS, STREET SWEEPERS & FLUSHERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.81	0.79	0.76	0.72	
B20 0.00	BRUSH CHIPPERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.81	0.79	0.76	0.72	
B25 0.00	BUCKETS, CLAMSHELL	1.10	1.06	1.03	1.00	0.93	0.95	0.96	0.95	0.95	0.93	0.91	0.91	0.87	0.80	0.76	0.71	0.65		
B30 0.00	BUCKETS, CONCRETE																			

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years						Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
B30 0.10	GENERAL PURPOSE, MANUAL TRIP	1.09	1.05	1.03	1.00	0.94	0.95	0.96	0.95	0.95	0.93	0.92	0.91	0.92	0.87	0.81	0.77	0.72	0.66
B30 0.20	LAYDOWN	1.09	1.05	1.03	1.00	0.94	0.95	0.96	0.95	0.95	0.93	0.92	0.91	0.92	0.87	0.81	0.77	0.72	0.66
B30 0.30	LOWBOY	1.09	1.05	1.03	1.00	0.94	0.95	0.96	0.95	0.95	0.93	0.92	0.91	0.92	0.87	0.81	0.77	0.72	0.66
B30 0.40	LOW SLUMP	1.09	1.05	1.03	1.00	0.94	0.95	0.96	0.95	0.95	0.93	0.92	0.91	0.92	0.87	0.81	0.77	0.72	0.66
B35 0.00	BUCKETS, DRAGLINE																		
B35 0.10	LIGHT WEIGHT	1.10	1.06	1.03	1.00	0.93	0.95	0.96	0.95	0.95	0.93	0.91	0.91	0.91	0.87	0.80	0.76	0.71	0.65
B35 0.20	MEDIUM WEIGHT	1.10	1.05	1.03	1.00	0.93	0.95	0.96	0.95	0.95	0.93	0.91	0.91	0.91	0.87	0.80	0.76	0.71	0.65
B35 0.30	HEAVY WEIGHT	1.10	1.05	1.03	1.00	0.93	0.95	0.96	0.95	0.95	0.93	0.91	0.91	0.91	0.87	0.80	0.76	0.71	0.65
C05 0.00	CHAIN SAWS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
C10 0.00	COMPACTORS, WALK-BEHIND OR REMOTE CONTROLLER																		
C10 0.10	COMPACTORS, RAMMERS / TAMPERS & VIBRATORY PLATES	1.10	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.84	0.82	0.80	0.76	0.73
C10 0.20	ROLLERS, VIBRATORY	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.77	0.74	0.70
C15 0.00	CONCRETE CLEANERS / BLASTERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68
C20 0.00	CONCRETE BUGGIES	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68
C25 0.00	CONCRETE FINISHERS/SCREEDS/SPREADERS																		
C25 0.10	FINISHERS/TROWELS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.73	0.68
C25 0.20	VIBRATORY SCREED	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.73	0.68
C25 0.25	VIBRATORY LASER SCREED	1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.92	0.90	0.88	0.85	0.84	0.81	0.78	0.75	0.71	0.67
C25 0.30	MATERIAL/TOPPING SPREADERS	1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.92	0.90	0.88	0.85	0.84	0.81	0.78	0.75	0.71	0.67
C30 0.00	CONCRETE GRINDERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.73	0.68
C35 0.00	CONCRETE GUNITERS / SHOTCRETTERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68
C40 0.00	CONCRETE MIXING UNITS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.73	0.68
C45 0.00	CONCRETE PAVING MACHINES	1.03	1.00	1.00	1.00	1.00	0.98	0.96	0.94	0.91	0.88	0.86	0.84	0.82	0.79	0.77	0.75	0.72	0.69
C55 0.00	CONCRETE PUMPS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.81	0.79	0.76	0.72
C60 0.00	CONCRETE SAWS (Add cost for sawblade wear)	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.87	0.86	0.84	0.81	0.79	0.76	0.72
C65 0.00	CONCRETE VIBRATORS	1.04	1.01	1.00	1.00	1.01	0.99	1.00	1.00	1.00	1.00	0.99	0.97	0.98	0.97	0.94	0.94	0.90	0.86
C70 0.00	CRANES, GANTRY & STRADDLE																		

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years										Year Purchased New															
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988								
C75 0.00	CRANES, HYDRAULIC, SELF-PROPELLED	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C80 0.00	CRANES, HYDRAULIC, TRUCK MOUNTED																										
C80 0.01	UNDER 26 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C80 0.02	26 TON THRU 65 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.85	0.84	0.80	0.75	0.72	0.69	0.64								
C80 0.03	66 TON THRU 125 TON	1.10	1.05	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.87	0.85	0.84	0.80	0.76	0.73	0.69	0.64								
C80 0.04	OVER 125 TON	1.10	1.05	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.87	0.85	0.84	0.80	0.76	0.73	0.69	0.64								
C85 0.00	CRANES, MECHANICAL, LATTICE BOOM, CRAWLER MOUNTED																										
C85 0.11	DRAGLINE, CLAMSHELL, 0 THRU 1.0 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74	0.71	0.68	0.62								
C85 0.12	DRAGLINE, CLAMSHELL, OVER 1.0 CY THRU 2.5 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.68	0.63								
C85 0.13	DRAGLINE, CLAMSHELL, OVER 2.5 CY THRU 5.0 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C85 0.14	DRAGLINE, CLAMSHELL, OVER 5.0 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.85	0.84	0.80	0.75	0.72	0.69	0.64								
C85 0.21	LIFTING, 0 THRU 25 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.68	0.63								
C85 0.22	LIFTING, 26 TON THRU 50 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C85 0.23	LIFTING, 51 TON THRU 150 TON	1.10	1.05	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.87	0.85	0.84	0.80	0.76	0.73	0.69	0.64								
C85 0.24	LIFTING, OVER 150 TON	1.09	1.05	1.03	1.00	0.94	0.95	0.95	0.93	0.91	0.89	0.87	0.85	0.84	0.80	0.76	0.73	0.70	0.64								
C90 0.00	CRANES, MECHANICAL, LATTICE BOOM, TRUCK MOUNTED																										
C90 0.01	UNDER 26 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C90 0.02	26 TON THRU 65 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.85	0.84	0.80	0.75	0.72	0.69	0.64								
C90 0.03	66 TON THRU 125 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
C90 0.04	OVER 125 TON	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.85	0.84	0.80	0.75	0.72	0.69	0.64								
C95 0.00	CRANES, TOWER	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63								
D10 0.00	DRILLS,AIR/HYDRAULIC,CRWLR MTD,0" THRU 6.5" DIA HOLE (Add cost for drill steel and bit wear)																										
D10 0.10	AIR TRACK (Add cost for drill steel and bit wear)	1.15	1.09	1.02	1.00	0.92	0.89	0.88	0.86	0.85	0.83	0.80	0.78	0.76	0.74	0.73	0.71	0.68	0.63								
D10 0.20	HYDRAULIC TRACK (Add cost for drill steel and bit wear)	1.16	1.10	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.72	0.69	0.66	0.62								
D15 0.00	DRILLS, HORIZONTAL BORING & GROUND PIERCING (Add cost for drill steel and bit wear)	1.16	1.10	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.72	0.69	0.66	0.62								
D20 0.00	DRILLS, CORE, COLUMN MOUNTED (Add cost for drill steel and bit wear)	1.16	1.10	1.02	1.00	0.91	0.89	0.87	0.85	0.84	0.82	0.78	0.76	0.75	0.72	0.71	0.69	0.66	0.61								
D25 0.00	DRILLS, CORE & DOWELLING (Add cost for drill steel and bit wear)	1.16	1.10	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.72	0.69	0.66	0.62								

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years						Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
D30 0.00	DRILLS, EARTH / AUGER (Add cost for drill steel and cutting edge wear)	1.16	1.10	1.02	1.00	0.91	0.89	0.87	0.86	0.84	0.82	0.79	0.77	0.75	0.73	0.72	0.69	0.66	0.62
D35 0.00	DRILLS, ROTARY BLASTHOLE (Add cost for drill steel and bit wear)																		
D35 0.11	DIESEL, 4.5" THRU 9.875" DIAMETER HOLE (Add cost for drill steel and bit wear)	1.15	1.09	1.02	1.00	0.92	0.90	0.88	0.87	0.85	0.84	0.80	0.78	0.77	0.75	0.74	0.71	0.69	0.64
D35 0.12	DIESEL, OVER 9.875" DIAMETER (Add cost for drill steel and bit wear)	1.14	1.09	1.02	1.00	0.92	0.90	0.89	0.87	0.86	0.84	0.81	0.79	0.78	0.76	0.75	0.72	0.70	0.65
D35 0.21	ELECTRIC, 4.5" THRU 9.875" DIAMETER HOLE (Add cost for drill steel and bit wear)	1.15	1.09	1.02	1.00	0.92	0.90	0.88	0.87	0.85	0.84	0.80	0.78	0.77	0.75	0.74	0.71	0.69	0.64
D35 0.22	ELECTRIC, OVER 9.875" DIAMETER (Add cost for drill steel and bit wear)	1.14	1.09	1.02	1.00	0.92	0.90	0.89	0.87	0.86	0.84	0.81	0.79	0.78	0.76	0.75	0.72	0.70	0.65
F10 0.00	FORK LIFTS	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70
G10 0.00	GENERATOR SETS																		
G10 0.10	PORTABLE	1.08	1.02	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.99	0.98	0.95	0.94	0.93	0.91	0.90	0.87	0.82
G10 0.20	SKID MOUNTED	1.08	1.02	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.99	0.98	0.95	0.94	0.93	0.91	0.90	0.87	0.82
G15 0.00	GRADERS, MOTOR	1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.84	0.82	0.79	0.74	0.71	0.68	0.65	0.61
H10 0.00	HAMMERS, HYDRAULIC (Demolition tool) (Add cost for point wear)	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69
H13 0.00	HAZARDOUS/TOXIC WASTE EQUIPMENT																		
H13 0.11	COMPACTORS (Compression force) 0 THRU 50 TONS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
H13 0.12	COMPACTORS (Compression force) OVER 50 TONS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71
H13 0.21	FILTER PRESSES, STATIONARY	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70
H13 0.22	FILTER PRESSES, MOBILE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
H13 0.30	CENTRIFUGES	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68
H13 0.40	SHREDDERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
H13 0.51	SOIL TREATMENT PLANT, MOBILE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
H13 0.61	SLUDGE PROCESSING EQUIP, SLUDGE DISPENSERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.89	0.87	0.86	0.84	0.81	0.78	0.75	0.71
H13 0.71	WASTE HANDLING EQUIPMENT, DRUM HANDLING	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.77	0.74	0.70
H15 0.00	HEATERS, SPACE																		
H20 0.00	HOISTS & AIR WINCHES	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.77	0.74	0.70
H25 0.00	HYDRAULIC EXCAVATORS, CRAWLER MOUNTED																		
H25 0.10	0 LBS THRU 12,500 LBS (COMPACT EXCAVATORS)	1.11	1.06	1.03	1.00	0.92	0.94	0.94	0.92	0.90	0.87	0.85	0.82	0.77	0.72	0.69	0.65	0.58	
H25 0.11	OVER 12,500 LBS THRU 40,000 LBS	1.11	1.06	1.03	1.00	0.92	0.94	0.94	0.92	0.90	0.88	0.85	0.83	0.82	0.77	0.72	0.69	0.65	0.59

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years							Year Purchased New															
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988					
H25 0.12	OVER 40,000 LBS THRU 100,000 LBS	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.90	0.88	0.85	0.83	0.82	0.78	0.73	0.70	0.66	0.60					
H25 0.13	OVER 100,000 LBS THRU 160,000 LBS	1.10	1.06	1.03	1.00	0.93	0.94	0.94	0.93	0.91	0.88	0.86	0.84	0.83	0.79	0.74	0.71	0.67	0.62					
H25 0.14	OVER 160,000 LBS	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.68	0.63					
H25 0.21	ATTACHMENTS, MOBILE SHEARS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.78	0.74	0.70					
H25 0.22	ATTACHMENTS, MATERIAL HANDLING	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					
H25 0.23	ATTACHMENTS, CONCRETE PULVERIZERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.78	0.74	0.70					
H25 0.24	ATTACHMENTS, COMPACTORS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.78	0.74	0.70					
H30 0.00	HYDRAULIC EXCAVATORS, WHEEL MOUNTED																							
H30 0.01	0 THRU 1.0 CY	1.11	1.06	1.03	1.00	0.92	0.94	0.94	0.92	0.90	0.87	0.85	0.82	0.81	0.77	0.72	0.69	0.65	0.58					
H30 0.02	OVER 1.0 CY	1.11	1.06	1.03	1.00	0.93	0.94	0.94	0.92	0.90	0.88	0.85	0.83	0.82	0.78	0.72	0.69	0.65	0.59					
H35 0.00	HYDRAULIC SHOVELS, CRAWLER MOUNTED																							
H35 0.11	DIESEL, 0 CY THRU 5.0 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74	0.71	0.68	0.62					
H35 0.12	DIESEL, OVER 5.0 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.68	0.63					
H35 0.21	ELECTRIC, OVER 2.5 CY	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.84	0.80	0.75	0.72	0.69	0.63					
L10 0.00	LAND CLEARING EQUIPMENT	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.95	0.93	0.91	0.88	0.84	0.81	0.76	0.73	0.71	0.68	0.64					
L15 0.00	LANDSCAPING EQUIPMENT	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.77	0.74	0.70					
L20 0.00	LIGHTING SETS, TRAILER MOUNTED																							
L20 0.10	METALLIC VAPOR	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69					
L25 0.00	LINE STRIPING EQUIPMENT	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69					
L30 0.00	LOADERS, BELT (Conveyor belts) & ACCESSORIES	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70					
L35 0.00	LOADERS, FRONT END, CRAWLER TYPE	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.95	0.93	0.91	0.88	0.84	0.81	0.76	0.73	0.71	0.68	0.64					
L40 0.00	LOADERS, FRONT END, WHEEL TYPE																							
L40 0.11	ARTICULATED, 0 THRU 225 HP	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.93	0.92	0.89	0.87	0.85	0.82	0.79	0.77	0.74	0.70					
L40 0.12	ARTICULATED, OVER 225 HP	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.94	0.93	0.90	0.88	0.86	0.83	0.81	0.78	0.76	0.73					
L40 0.20	SKID STEER	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.94	0.92	0.89	0.87	0.85	0.82	0.80	0.77	0.75	0.71					
L40 0.21	SKID STEER ATTACHMENTS	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.93	0.92	0.89	0.86	0.84	0.81	0.79	0.76	0.74	0.70					
L40 0.31	TOOL CARRIER & TELESCOPIC HANDLERS, 0 THRU 225 HP	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.93	0.92	0.89	0.87	0.85	0.82	0.79	0.77	0.74	0.71					

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years						Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
L40 0.32	TOOL CARRIER & TELESCOPIC HANDLERS, OVER 225 HP	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.94	0.93	0.90	0.88	0.86	0.83	0.81	0.79	0.77	0.73
L45 0.00	LOADERS / BACKHOE, CRAWLER TYPE	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.91	0.88	0.84	0.80	0.76	0.73	0.71	0.68	0.63
L50 0.00	LOADERS / BACKHOE, WHEEL TYPE	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.96	0.93	0.92	0.89	0.87	0.85	0.82	0.79	0.77	0.74	0.71
L55 0.00	LOADER / BACKHOE, ATTACHMENTS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69
L60 0.00	LOG SKIDTERS	1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92	0.91	0.89	0.88	0.87	0.84	0.83	0.81	0.80	0.77	0.75
M10 0.00	MARINE EQUIPMENT (NON DREDGING)																		
M10 0.11	AQUATIC MAINTENANCE	1.15	1.11	1.05	1.00	0.99	0.96	0.94	0.94	0.92	0.89	0.85	0.83	0.82	0.78	0.73	0.70	0.67	0.63
M10 0.12	AQUATIC MAINTENANCE ATTACHMENTS	1.16	1.12	1.05	1.00	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.82	0.80	0.76	0.71	0.68	0.64	0.60
M10 0.21	HYDRAULIC CUTTERHEAD DREDGE, 8" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.85	0.84	0.83	0.79	0.75	0.72	0.68	0.65
M10 0.22	HYDRAULIC CUTTERHEAD DREDGE, 8" - 12", TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.85	0.84	0.83	0.79	0.75	0.72	0.68	0.65
M10 0.23	HYDRAULIC AUGERHEAD DREDGE, 12" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.85	0.84	0.83	0.79	0.75	0.72	0.68	0.65
M10 0.24	HYDRAULIC FLOATING PUMPS, 12" OR LESS, TRANSPORTABLE	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.83	0.82	0.78	0.74	0.71	0.67	0.64
M10 0.25	HYDRAULIC DREDGE PUMPS, 12" OR LESS, TRANSPORTABLE	1.15	1.12	1.05	1.00	0.99	0.96	0.94	0.93	0.92	0.88	0.84	0.82	0.81	0.77	0.72	0.69	0.66	0.62
M10 0.26	HYDRAULIC DREDGE / PUMP ATTACHMENTS	1.15	1.12	1.05	1.00	0.99	0.96	0.94	0.93	0.92	0.88	0.84	0.82	0.81	0.77	0.72	0.69	0.66	0.62
M10 0.31	SMALL MECH DREDGES, CLAMSHELL, BARGE-MTD TO 5 CY	1.10	1.05	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.87	0.85	0.84	0.80	0.76	0.73	0.69	0.64
M10 0.32	SMALL MECH DREDGES, AMPHIBIOUS EXCAVATORS	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.84	0.83	0.79	0.74	0.72	0.68	0.62
M10 0.33	SMALL MECH DREDGES, HOE-MOUNTED DREDGING ATTACH	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.84	0.83	0.79	0.75	0.71	0.68	0.65
M10 0.41	WORK FLOATS (NON-DREDGING)	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.83	0.82	0.78	0.74	0.71	0.67	0.64
M10 0.42	WORK BARGES (SECTIONAL, NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.84	0.83	0.80	0.76	0.73	0.70	0.67
M10 0.45	FLAT-DECK OR CARGO BARGE (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.74	0.71	0.68
M10 0.46	DUMP SCOW (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.74	0.71	0.68
M10 0.47	DRILL BARGE (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.83	0.80	0.76	0.73	0.70	0.67
M10 0.48	ALL OTHER BARGES (NON-DREDGING)	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.83	0.80	0.76	0.73	0.70	0.67
M10 0.51	BOATS & LAUNCHES, 0 THRU 250 HP	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.92	0.89	0.85	0.84	0.82	0.78	0.74	0.71	0.68	0.65
M10 0.53	BOATS & LAUNCHES, 251 THRU 500 HP	1.14	1.11	1.05	1.00	0.99	0.96	0.95	0.94	0.93	0.89	0.86	0.84	0.83	0.79	0.75	0.72	0.69	0.66
M10 0.54	TUGS, 501 THRU 1,000 HP	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.73	0.70	0.67
M10 0.55	TUGS, 1,000 THRU 2,000 HP	1.13	1.10	1.04	1.00	0.99	0.97	0.95	0.94	0.93	0.90	0.86	0.85	0.84	0.80	0.76	0.74	0.71	0.68

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years										Year Purchased New														
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988							
P10 0.00	PILE HAMMER ACCESSORIES - EXTRACTORS & BOX LEADS	1.14	1.00	1.02	1.00	0.98	0.98	0.96	0.95	0.92	0.90	0.87	0.84	0.82	0.79	0.76	0.73	0.68	0.63							
P20 0.00	PILE HAMMERS, DOUBLE ACTING																									
P20 0.10	DIESEL	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.85	0.84	0.81	0.78	0.75	0.72	0.67							
P20 0.20	PNUEMATIC (STEAM/AIR)	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69							
P25 0.00	PILE HAMMERS, SINGLE ACTING																									
P25 0.10	DIESEL	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69							
P25 0.20	PNUEMATIC (STEAM/AIR)	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.78	0.74	0.70							
P30 0.00	PILE HAMMERS, DRIVER/ EXTRACTOR, VIBRATORY	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69							
P35 0.00	PIPELAYERS	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.95	0.93	0.91	0.88	0.85	0.81	0.77	0.74	0.72	0.69	0.65							
P40 0.00	PLATFORMS & MAN-LIFTS	1.10	1.06	1.03	1.00	0.93	0.95	0.94	0.93	0.91	0.89	0.86	0.85	0.84	0.80	0.75	0.72	0.69	0.63							
P45 0.00	PUMPS, GROUT	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71							
P50 0.00	PUMPS, WATER, CENTRIFUGAL, TRASH																									
P50 0.11	ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P50 0.12	ELECTRIC DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P50 0.21	WHEEL MOUNTED, ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P50 0.22	WHEEL MOUNTED, ELECTRIC DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P50 0.31	HOSES, PUMP, SUCTION & DISCHARGE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.87	0.86	0.84	0.81	0.79	0.75	0.71							
P55 0.00	PUMPS, WATER, SUBMERSIBLE																									
P55 0.01	ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P55 0.02	ELECTRIC DRIVE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71							
P60 0.00	PUMPS, WATER, CENTRIFUGAL, DEWATERING																									
P60 0.11	SKID MOUNTED, ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P60 0.12	SKID MOUNTED, ELECTRIC DRIVE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71							
P60 0.21	WHEEL MOUNTED, ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							
P60 0.22	WHEEL MOUNTED, ELECTRIC DRIVE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.77	0.74	0.69							
P65 0.00	PUMPS, WATER, DIAPHRAGM																									
P65 0.11	SKID MOUNTED, ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69							

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years						Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
P65 0.12	SKID MOUNTED, ELECTRIC DRIVE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71
P65 0.21	WHEEL MOUNTED, ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
P65 0.22	WHEEL MOUNTED, ELECTRIC DRIVE	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71
P70 0.00	PUMPS, WATER (For core drills)																		
P70 0.01	ENGINE DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68
P70 0.02	ELECTRIC DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68
R10 0.00	RIPPERS & HYDRAULIC BANK SLOPERS (Add cost for point wear)	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.91	0.88	0.84	0.80	0.76	0.73	0.71	0.68	0.63
R15 0.00	ROLLERS, STATIC, TOWED, PNEUMATIC	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.82	0.87	0.86	0.83	0.81
R20 0.00	ROLLERS, STATIC, TOWED, STEEL DRUM	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.82	0.87	0.86	0.83	0.81
R30 0.00	ROLLERS, STATIC, SELF-PROPELLED																		
R30 0.01	PNEUMATIC	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.82	0.87	0.86	0.83	0.81
R30 0.02	SMOOTH DRUM	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.83	0.87	0.86	0.84	0.82
R30 0.03	TAMPING FOOT, LANDFILL & SOIL COMPACTORS	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.91	0.88	0.83	0.82	0.87	0.86	0.83	0.81
R40 0.00	ROLLERS, VIBRATORY, TOWED	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.90	0.87	0.82	0.82	0.86	0.85	0.83	0.81
R45 0.00	ROLLERS, VIBRATORY, SELF-PROPELLED, DOUBLE DRUM	1.10	1.08	1.03	1.00	0.99	0.97	0.98	0.96	0.94	0.93	0.90	0.87	0.82	0.82	0.86	0.85	0.83	0.81
R50 0.00	ROLLERS, VIBRATORY, SELF-PROPELLED, SINGLE DRUM	1.11	1.08	1.03	1.00	0.99	0.96	0.98	0.96	0.93	0.92	0.90	0.87	0.81	0.81	0.86	0.85	0.82	0.80
R55 0.00	ROOFING EQUIPMENT	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.80	0.78	0.74	0.70
S10 0.00	SCRAPERS, ELEVATING																		
S10 0.01	0 THRU 200 HP	1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.84	0.82	0.79	0.74	0.71	0.68	0.65	0.61
S10 0.02	OVER 200 HP	1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.83	0.82	0.79	0.73	0.71	0.68	0.65	0.61
S15 0.00	SCRAPERS, CONVENTIONAL	1.08	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.91	0.89	0.84	0.82	0.80	0.74	0.72	0.69	0.66	0.63
S20 0.00	SCRAPERS, TANDEM POWERED	1.08	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.91	0.89	0.84	0.82	0.80	0.74	0.72	0.69	0.66	0.63
S25 0.00	SCRAPERS, TRACTOR DRAWN	1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.91	0.89	0.84	0.82	0.79	0.74	0.71	0.68	0.66	0.62
S30 0.00	SCREENING & CRUSHING PLANTS																		
S30 0.10	CONVEYORS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72
S30 0.20	CRUSHERS - VERTICAL & HORIZONTAL SHAFT IMPACTOR	1.10	1.00	1.01	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.85	0.82	0.80	0.77	0.73
S30 0.21	CRUSHERS - CONE	1.10	1.00	1.01	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.85	0.82	0.80	0.77	0.73

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years						Year Purchased New											
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988
S30 0.22	CRUSHERS - JAW	1.10	1.00	1.01	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.85	0.82	0.80	0.77	0.73
S30 0.30	SCREENING PLANT	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72
S35 0.00	SNOW REMOVAL EQUIPMENT	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
S40 0.00	SOIL & ROAD STABILIZERS	1.09	1.05	1.01	1.00	0.99	0.98	0.96	0.93	0.90	0.89	0.84	0.82	0.79	0.74	0.71	0.68	0.65	0.61
S45 0.00	SPLITTERS, ROCK & CONCRETE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69
T10 0.00	TRACTOR BLADES & ATTACHMENTS	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.95	0.93	0.91	0.88	0.84	0.81	0.76	0.73	0.71	0.68	0.64
T15 0.00	TRACTORS, CRAWLER (DOZER) (includes blade)																		
T15 0.01	0 THRU 225 HP	1.10	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.90	0.87	0.83	0.79	0.74	0.71	0.69	0.66	0.61
T15 0.02	226 HP THRU 425 HP	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.94	0.92	0.91	0.88	0.84	0.81	0.76	0.73	0.71	0.68	0.63
T15 0.03	OVER 425 HP	1.09	1.05	1.02	1.00	1.00	0.99	0.98	0.95	0.93	0.91	0.88	0.85	0.82	0.77	0.74	0.72	0.69	0.65
T20 0.00	TRACTORS, WHEEL TYPE (DOZER)	1.10	1.07	1.02	1.00	0.99	0.97	0.95	0.92	0.91	0.89	0.89	0.88	0.85	0.83	0.81	0.80	0.78	0.76
T25 0.00	TRACTORS, AGRICULTURAL																		
T25 0.10	CRAWLER	1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92	0.91	0.89	0.88	0.87	0.84	0.83	0.81	0.80	0.77	0.75
T25 0.20	WHEEL	1.10	1.08	1.03	1.00	0.99	0.97	0.95	0.92	0.90	0.89	0.88	0.87	0.84	0.83	0.81	0.79	0.77	0.75
T30 0.00	TRENCHERS, CHAIN TYPE CUTTER	1.00	1.00	1.00	1.00	0.99	0.97	0.95	0.92	0.88	0.87	0.86	0.83	0.78	0.74	0.73	0.72	0.70	0.69
T35 0.00	TRENCHERS, WHEEL TYPE CUTTER	1.00	1.00	1.00	1.00	0.99	0.97	0.95	0.92	0.88	0.87	0.86	0.83	0.78	0.74	0.73	0.72	0.70	0.69
T40 0.00	TRUCK OPTIONS																		
T40 0.10	CRANES / HOISTS, PERSONNEL & MATERIAL HANDLING	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
T40 0.20	DUMP BODY, REAR	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.81	0.79	0.76	0.72
T40 0.30	FLATBEDS, WITH SIDES	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
T40 0.41	HOIST, ELECTRIC DRIVE	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
T40 0.50	TRANSIT MIXERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71
T40 0.60	WATER TANKS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68
T40 0.70	ALL OTHER OPTIONS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.83	0.80	0.77	0.74	0.69
T45 0.00	TRUCK TRAILERS																		
T45 0.10	BOTTOM DUMP	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72
T45 0.20	END DUMP	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years							Year Purchased New															
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988					
T45 0.30	PUP TRAILER	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.81	0.79	0.76	0.72					
T45 0.41	LOWBOY, RIGID NECK, DROP DECK	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72					
T45 0.50	FLATBED TRAILER	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72					
T45 0.60	MISCELLANEOUS / UTILITY	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72					
T45 0.70	WATER TANKER TRAILER	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					
T45 0.80	DECONTAMINATION FACILITY	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68					
T45 0.90	TANK TRAILERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					
T50 0.00	TRUCKS, HIGHWAY (Add attachments as required)																							
T50 0.01	0 THRU 10,000 GVW	1.07	1.04	1.01	1.00	0.98	0.97	1.00	0.98	0.98	1.00	1.00	0.97	0.92	0.87	0.83	0.79	0.78	0.74					
T50 0.02	OVER 10,000 THRU 30,000 GVW (Chassis only - Add options)	1.07	1.04	1.01	1.00	0.98	0.97	1.00	0.98	0.98	1.00	1.00	0.97	0.93	0.88	0.83	0.80	0.78	0.75					
T50 0.03	OVER 30,000 GVW (Chassis only - Add options)	1.07	1.04	1.01	1.00	0.98	0.98	1.00	0.98	0.98	1.00	1.00	0.97	0.93	0.88	0.83	0.80	0.79	0.75					
T55 0.00	TRUCKS, OFF-HIGHWAY																							
T55 0.10	RIGID FRAME	1.15	1.07	1.01	1.00	0.98	0.97	0.95	0.93	0.92	0.90	0.87	0.82	0.79	0.78	0.77	0.75	0.72	0.66					
T55 0.20	ARTICULATED FRAME	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.78	0.77	0.74	0.71	0.65					
T56 0.00	TRUCKS, OFF-HIGHWAY/PRIME MOVER TRACTORS & WAGONS																							
T56 0.10	PRIME MOVER TRACTORS	1.15	1.07	1.01	1.00	0.98	0.97	0.95	0.93	0.92	0.90	0.87	0.82	0.79	0.78	0.77	0.75	0.72	0.66					
T56 0.20	WAGONS, BOTTOM DUMP	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.77	0.76	0.74	0.70	0.64					
T56 0.30	WAGONS, REAR DUMP	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.80	0.77	0.77	0.76	0.73	0.69	0.63					
T57 0.00	TRUCKS, VACUUM	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70					
T60 0.00	TRUCKS, WATER, OFF-HIGHWAY	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.80	0.77	0.77	0.76	0.73	0.69	0.63					
T65 0.00	TUNNEL/MINING EQUIPMENT																							
T65 0.10	DRIFTING & TUNNELING DRILLS	1.14	1.09	1.02	1.00	0.92	0.90	0.89	0.87	0.86	0.84	0.81	0.79	0.78	0.76	0.75	0.72	0.70	0.65					
T65 0.20	TUNNEL BORING MACHINES	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.87	0.84	0.82	0.79	0.76	0.72	0.72				
T65 0.30	PRODUCTION DRILLING RIGS	1.15	1.09	1.02	1.00	0.92	0.90	0.88	0.87	0.86	0.84	0.81	0.79	0.77	0.75	0.75	0.72	0.69	0.65					
T65 0.40	ROADHEADERS & CONTINUOUS MINERS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.94	0.92	0.90	0.88	0.86	0.84	0.82	0.79	0.76	0.72					
T65 0.50	ROCK BOLTING EQUIPMENT	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70					
T65 0.61	LOADING & HAULING EQUIPMENT, DIESEL OR GAS	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71					

**Table 3-2 Equipment Age Adjustment Factors for Standby Cost**

CATEGORY SUB	REGION 4 TYPE OF EQUIPMENT	Life in Years							Year Purchased New															
		0 2005	1 2004	2 2003	3 2002	4 2001	5 2000	6 1999	7 1998	8 1997	9 1996	10 1995	11 1994	12 1993	13 1992	14 1991	15 1990	16 1989	17 1988					
T65 0.62	LOADING & HAULING EQUIPMENT, ELECTRIC	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71					
T65 0.63	LOADING & HAULING EQUIPMENT, AIR-POWERED	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					
T65 0.70	LOCOMOTIVES	1.11	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.93	0.92	0.89	0.87	0.86	0.83	0.81	0.78	0.75	0.71					
T65 0.90	OTHER TUNNELING EQUIPMENT	1.11	1.00	1.02	1.00	0.98	0.98	0.97	0.96	0.93	0.91	0.89	0.87	0.85	0.83	0.80	0.78	0.74	0.70					
W10 0.00	WAGONS, BOTTOM DUMP	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.78	0.76	0.74	0.70	0.65					
W15 0.00	WAGONS, REAR DUMP	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.81	0.78	0.78	0.76	0.74	0.70	0.65					
W25 0.00	WATER & CO <sub>2</sub> BLASTERS																							
W25 0.10	LOW PRESSURE, (< 5,000 PSI)	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68					
W25 0.20	HIGH PRESSURE, (>= 5,000 PSI)	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68					
W25 0.30	STEAM CLEANERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.85	0.82	0.79	0.76	0.72	0.68					
W25 0.40	CO <sub>2</sub> BLASTERS	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					
W25 0.50	WET ABRASIVE BLASTING SYSTEM (TORBO)	1.13	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.92	0.90	0.88	0.85	0.84	0.81	0.78	0.75	0.71	0.66					
W30 0.00	WATER TANKS																							
W30 0.10	PORTABLE WITH WHEELS	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.80	0.77	0.77	0.76	0.73	0.69	0.63					
W30 0.20	SKID MOUNTED	1.16	1.07	1.01	1.00	0.98	0.96	0.94	0.93	0.92	0.89	0.86	0.80	0.77	0.77	0.76	0.73	0.69	0.63					
W35 0.00	WELDERS																							
W35 0.10	ENGINE DRIVEN	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.88	0.86	0.84	0.82	0.79	0.76	0.72	0.68					
W35 0.20	ELECTRIC DRIVEN	1.12	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.93	0.91	0.89	0.86	0.85	0.82	0.79	0.77	0.73	0.69					

## STANDBY HOURLY RATE CALCULATION FOR OVERAGE EQUIPMENT

### EXAMPLE

Assume the following information for the rate calculation example:

1. The unit of equipment is not listed in table 2-1.
2. The equipment is contractor owned.
3. Data for the unit in question:
  - a. Caterpillar front-end wheel loader
  - b. Model 966D, 4WD, 4 CY capacity
  - c. Serial number indicates year of manufacture = 1987
  - d. Actual purchase price in 1987 = \$187,255
  - e. Horsepower is 200 hp (fuel is Diesel off-road)
  - f. Drive tire (DT) size = 23.50 x 25, 16 ply, L-3  
DT cost (2005) = 4 tires x \$1,954.00 = \$7,816.00
  - g. Weight = 44,400 lbs
4. Use the actual cost data as follows:
  - a. Purchase price (TEV) = \$187,255
  - b. Year of manufacture = 1987
5. Hourly rate is computed as follows:

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

Use this worksheet to compute rates for equipment that is not in this pamphlet.

### **1. EQUIPMENT INFORMATION AND EXPENSE FACTORS**

ID No.: \_\_\_\_\_

a. Equipment Specification Data:

- (1) Equipment Description: Caterpillar front-end wheel loader  
 (2) Model and Series: Model 966D, 4WD, 4 CY capacity  
 (3) Year of Use: 2005  
 (4) Year Manufactured: 1987  
 (5) Horsepower - Equipment: 200  
 (6) Horsepower - Carrier: \_\_\_\_\_  
 (7) Fuel type: - Equipment: gas/diesel off-road/diesel on-road/electric/air D-off  
                           - Carrier: gas/diesel off-road/diesel on-road/electric/air \_\_\_\_\_  
 (8) Shipping Weight (cwt): 444 cwt  
 (9) Tire size and number of tires: (Cost of tires based on year of use – see 1.a.(3) and appendix F)

	No.	Size/Ply	Unit Price	Cost
(a) Front (FT):	_____	_____	\$ _____	\$ _____
(b) Drive (DT):	4-ANNB5	23.5x25/16 ply	\$ 1,954.00	\$ 7,816.00
(c) Trailing (TT):	_____	_____	\$ _____	\$ _____
(d) Total Tire Cost:				\$ 7,816.00

### **USE APPENDIX D TO COMPLETE THE FOLLOWING DATA:**

- b. Category and Subcategory Number: L40 0.11  
 c. Hourly Expense Calculation Factors:  
 (1) Economic Key (EK): 45  
 (2) Condition (C): X Average or Severe or Difficult  
 (3) Discount Code (DC): B = 7.5% (0.075) – or – S = 15.0% (0.15) 0.075  
 (4) Life in Hours (LIFE): 9,250  
 (5) Salvage Value Percentage (SLV): 0.25  
 (6) Fuel Factor – Equipment [Electric (E) Gas (G) Diesel (D)]: 0.031  
 (7) Fuel Factor – Carrier (E G D): 0.000  
 (8) Filters, Oil, and Grease (FOG) Factor (E G D): 0.445  
 (9) Tire Wear Factor:  
     (a) Front (FT): 0.00  
     (b) Drive (DT): 0.54  
     (c) Trailing (TT): 0.00  
 (10) Repair Cost Factor (RCF): 0.70

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

Page 1 of 6

## **2. EQUIPMENT VALUE**

a. List Price + Accessories: *[at Year of Manufacture]* = \$ \_\_\_\_\_

(1) Discount:  $(\text{List Price} + \text{Accessories}) \times (\text{Discount Code})$   
[1.c.(3)]  
 $(\$ \quad + \$ \quad ) \times (\quad ) = -(\$ \quad )$

(2) Subtotal [2,a.] - [2,a.(1)] Subtotal=\$

(3) Sales or Import Tax: (Subtotal) x (Tax Rate)  
[2.a.(2)] [Appendix B]

$$(\$ \underline{\hspace{2cm}}) \times (\underline{\hspace{2cm}}) = +\$ \underline{\hspace{2cm}}$$

(4) Total Discounted Price: Subtotal: [2.a.(2)] + [2.a.(3)] Subtotal=\$\_\_\_\_\_

b. Freight: (Shipping Weight) x (Freight Rate per cwt)  
[1.a.(8)] [Appendix B]

(\_\_\_\_\_cwt) x (\$\_\_\_\_\_/cwt) =+\$\_\_\_\_\_

c. **TOTAL EQUIPMENT VALUE (TEV):** **TOTAL[2.]:=\$** **187,255.00**  
[(2.a.(4)] + [(2.b)]

a.  $(\text{LIFE hours (hr)}) / (\text{Working Hours Per Year (WHPY)}) = N$   
[1 c (4)] [Appendix B]

### **3. DEPRECIATION PERIOD (N)**

a.  $(LIFE \text{ hours (hr)}) / (Working \text{ Hours Per Year (WHPY)}) = N$   
[1.c.(4)] [Appendix B]

$$(9,250 \text{ hr}) / (1,260 \text{ hr/yr}) = 7.34$$

#### **4. OWNERSHIP COST**

#### a. Depreciation

(1) Tire Cost Index (TCI):  
$$\frac{(\text{Tire Index, Yr of Mfg})}{(\text{Tire Index, Based on 1.a.(3)})} = \underline{\text{Tire Cost Index (TCI)}}$$
  
[Appendix E, EK=100] [Appendix E, EK=100]

$$\frac{(2322)}{\text{For 1987}} / \frac{(2735)}{\text{For 2005}} = 0.849 \text{ (TCI)}$$

$$(2) \quad [(TEV) \times [1.0 - (SLV)] - [(TCI) \times (Tire Cost)]] / (LIFE)$$

[2.c.]	[1.c.(5)]	[4.a.(1)]	[1.a.(9)(d)]
--------	-----------	-----------	--------------

$$[(\$187,255.00) \times [1.0 - (0.250)] - [(0.849) \times (\$7,816.00)]] / (9,250 \text{ hr}) = \$\underline{\hspace{2cm}} 14.47 / \text{hr}$$

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

**4. OWNERSHIP COST (Continued)**

b. Facilities Capital Cost of Money (FCCM):

$$(1) \frac{[(N) - 1.0] \times [1.0 + (SLV)] + 2.0}{[2.0 \times (N)]} = \text{Avg Value Factor}$$

[3.a.]                    [1.c.5.]                    [3.a.]                    (AVF)

$$[(7.34 \text{ yr}) - 1.0] \times [1.0 + (0.250)] + 2.0 / [2.0 \times (7.34 \text{ yr})]$$

$$= \underline{\hspace{2cm}} 0.676 \text{ (AVF)}$$

$$(2) \frac{(TEV) \times (AVF) \times (\text{Adjusted Cost - of - Money})}{(WHPY)}$$

[2.c]                    [4.b.(1)]                    [Appendix B]                    [Appendix B]

$$(\$187,255.00) \times (0.676) \times (0.034) / (1,260 \text{ hr/yr})$$

$$=\$ \underline{\hspace{2cm}} 3.42 / \text{hr}$$

c. **TOTAL HOURLY OWNERSHIP COST: TOTAL [4.]:**  $= \$ \underline{\hspace{2cm}} 17.89 / \text{hr}$

[4.a.(2)] + [4.b.(2)]

**5. OPERATING COST**

a. Fuel Costs:

(1) Equipment:

$$(\text{Fuel Factor} \times (\text{Horsepower (hp)}) \times (\text{Fuel Cost Per Gallon (gal)})$$

[1.c.(6)]                    [1.a.(5)]                    [Appendix B]

$$(\underline{\hspace{2cm}}) \times (0 \text{ hp}) \times (\$0.00 / \text{gal}) = \$ \underline{\hspace{2cm}} 0.00 / \text{hr}$$

(2) Carrier:

$$(\text{Fuel Factor} \times (\text{Horsepower}) \times (\text{Fuel Cost Per Gallon}))$$

[1.c.(7)]                    [1.a.(6)]                    [Appendix B]

$$(\underline{\hspace{2cm}}) \times (0 \text{ hp}) \times (\$0.00 / \text{gal}) = \$ \underline{\hspace{2cm}} 0.00 / \text{hr}$$

(3) Total Hourly Fuel Cost: **Total [5.a.]**  $= \$ \underline{\hspace{2cm}} 0.00 / \text{hr}$

[(5.a.(1)) + (5.a.(2))]

b. FOG Cost:

(1) Equipment:

$$(\text{FOG Factor} \times (\text{Equipment Fuel Cost}) \times (\text{Labor Adjustment Factor (LAF)}))$$

[1.c.(8)]                    [5.a.(1)]                    [Appendix B]

$$(\underline{\hspace{2cm}}) \times (\$0.00 / \text{hr}) \times (0.00) = \$ \underline{\hspace{2cm}} 0.00 / \text{hr}$$

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

5. **OPERATING COST (Continued)**

(2) Carrier:

$$(\text{FOG Factor}) \times (\text{Carrier Fuel Cost}) \times (\text{LAF})$$

[1.c.(8)] [5.a.(2)] [Appendix B]

$$(\underline{0.000}) \times (\underline{\$0.00} / \text{hr}) \times (\underline{0.00}) = \$ \underline{0.00} / \text{hr}$$

(3) Total Hourly FOG Cost:  
[(5.b.(1)) + (5.b.(2))]

$$\text{Total } [5.b.] = \$ \underline{0.00} / \text{hr}$$

c. Alternative Fuel/FOG Cost:

$$\text{Total } [5.c.] = \$ \underline{0.00} / \text{hr}$$

(See chapter 2, paragraph 24.d. for guidance on when to use.)

d. Repair Cost:

(1) Economic Adjustment Factor (EAF):  
(EK is from [1.c.(1)])

$$(\text{Economic Index for Year 1.a.(3)}) / (\text{Economic Index for Year 1.a.(4)})$$

[Appendix E] [Appendix E]

$$(\underline{0}) / (\underline{0}) = \underline{0.000} \text{ (EAF)}$$

(See table 3-1 for last year of economic life.)

(2) Repair Factor (RF):

$$(\text{RCF}) \times (\text{EAF}) \times (\text{LAF}) = \underline{\text{Repair Factor (RF)}}$$

[1.c.(10)] [5.d.(1)] [Appendix B]

$$(\underline{0.00}) \times (\underline{0.000}) \times (\underline{0.00}) = \underline{0.000} \text{ (RF)}$$

(3) Repair Cost:

$$[(\text{TEV}) - [(\text{TCI}) \times (\text{Tire Cost})]] \times (\text{RF}) / (\text{LIFE})$$

[2.c.] [4.a.(1)] [1.a.(9)(d)] [5.d.(2)] [1.c.(4)]

$$[(\$ \underline{0}) - [(\underline{0.000}) \times (\underline{\$0.00})]] \times (\underline{0.000}) / (\underline{0})$$

(4) Total Hourly Repair Cost:

$$\text{Total } [5.d.] = \$ \underline{0.00} / \text{hr}$$

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

## **5. OPERATING COST (Continued)**

e. Tire Wear Cost: (Use current price levels. See Appendix F)

(1) Front Tires (FT):

[1.5 x (FT Cost)] / [1.8 x (FT Wear Factor) x (Maximum Tire Life Hours)]  
[1.a.(9)(a)] [1.c.(9)(a)] [Appendix G]

$$[1.5 \times (\$0.00 \text{_____})] / [1.8 \times (0.00 \text{_____}) \times (0 \text{_____}/\text{hr})]$$

= \$                          0.00 /hr

(2) Drive Tires (DT):

[1.5 x (DT Cost)] / [1.8 x (DT Wear Factor) x (Maximum Tire Life Hours)]  
[1.a.(9)(b)] [1.c.(9)(b)] [Appendix G]

[1.5 x (\$0.00 \_\_\_\_\_)] / [1.8 x (0.00 \_\_\_\_\_) x (0 \_\_\_\_\_ /hr)]

= \$                          0.00 /hr

(3) Trailing Tires (TT):

[1.5 x (TT Cost)] / [1.8 x (TT Wear Factor) x (Maximum Tire Life Hours)]  
[1.a.(9)(c)] [1.c.(9)(c)] [Appendix G]

$$[1.5 \times (\$0.00 \text{_____})] / [1.8 \times (0 \text{_____}) \times (0 \text{_____} / \text{hr})]$$

= \$                          0.00 /hr

(4) Total Tire Wear Cost:  
[Sum 5.e.(1) through 5.e.(3)]

**Total [5.e.] = \$                  0.00 /hr**

f. Tire Repair Cost:

(Total Tire Wear Cost) x 0.15 x (LAF)  
[5.e.(4)] [Appendix B]

**Total [5.f.]** = \$ **0.00** /hr

**g. TOTAL HOURLY OPERATING COST:**  
[Sum 5.a. through 5.f.]

**TOTAL [5.] = \$                  0.00 /hr**

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**

6. **HOURLY RATES**

- a. Total Hourly Rate: [based on 40 hours per week (wk)]

(Ownership Cost) + (Operating Cost)

(\$0.00 /hr) + (\$0.00 /hr)

= \$                          0.00 /hr

- b. Other Work Shifts Hourly Rate:

(Refer to Chapter 3, *Adjustments to Rates*, for methodology.)

[(Depreciation) + [(FCCM) x (40 hr/wk) / (Work hr/wk)] + (Operating Cost)]  
[4.a.(2)] [4.b.(2)] (example: 60 hr/wk) [5.g.]

[(\$0.00 /hr) + (\$0.00 /hr) x (40 hr/wk) / (0 hr/wk)] + (\$0.00 /hr)]

= \$                          0.00 /hr

- c. Standby Hourly Rate:

[(Depreciation) x 0.50] + (FCCM)  
[4.a.(2)] [4.b.(2)]

[(\$14.47 /hr) x 0.50] + (\$3.42 /hr)

= \$                          10.66 /hr

**See Chapter 3 if rate adjustments are necessary.**

**Figure 3-2. Standby Hourly Rate Calculation for Overage Equipment**